

THE MILLING WORLD

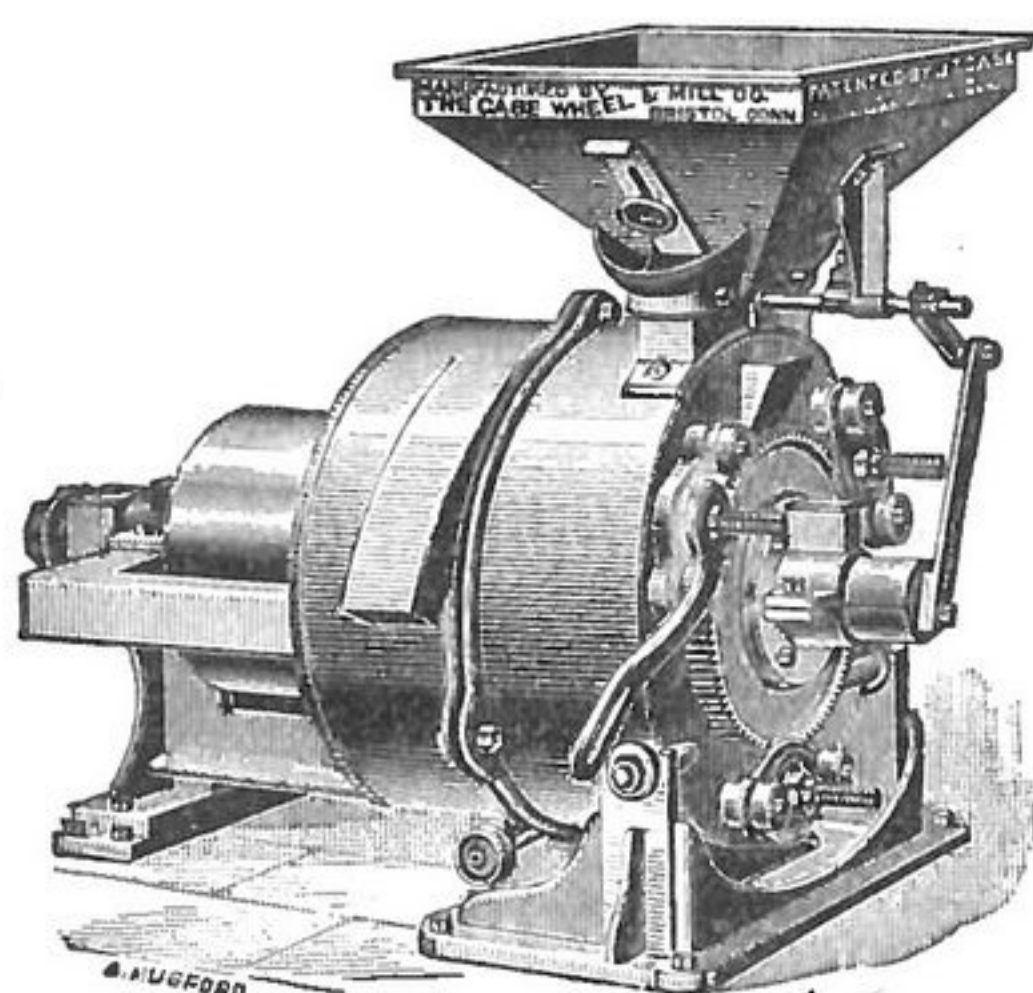
AND

CHRONICLE OF THE GRAIN AND FLOUR TRADE

VOL. XXI. No. 7.

BUFFALO, N. Y., OCTOBER 14, 1889.

\$1.50 PER YEAR.



VICTORY OVER ALL OTHERS. SINGLE & DOUBLE VERTICAL GRINDING MILLS.

(J. T. CASE'S PATENT.)

FACTS ARE MIGHTIER THAN ASSERTIONS. READ WHAT THEY SAY:

"Our 20-inch mill made by the Case Wheel & Mill Co. is in every respect satisfactory, easy to handle, and best results obtained of any mill in the country, with same quantity coal and power."—A. S. RUSSELL & Co., Meriden, Conn.

"Superior to any mill in use."—GEO. WESTON, Bristol, Conn.

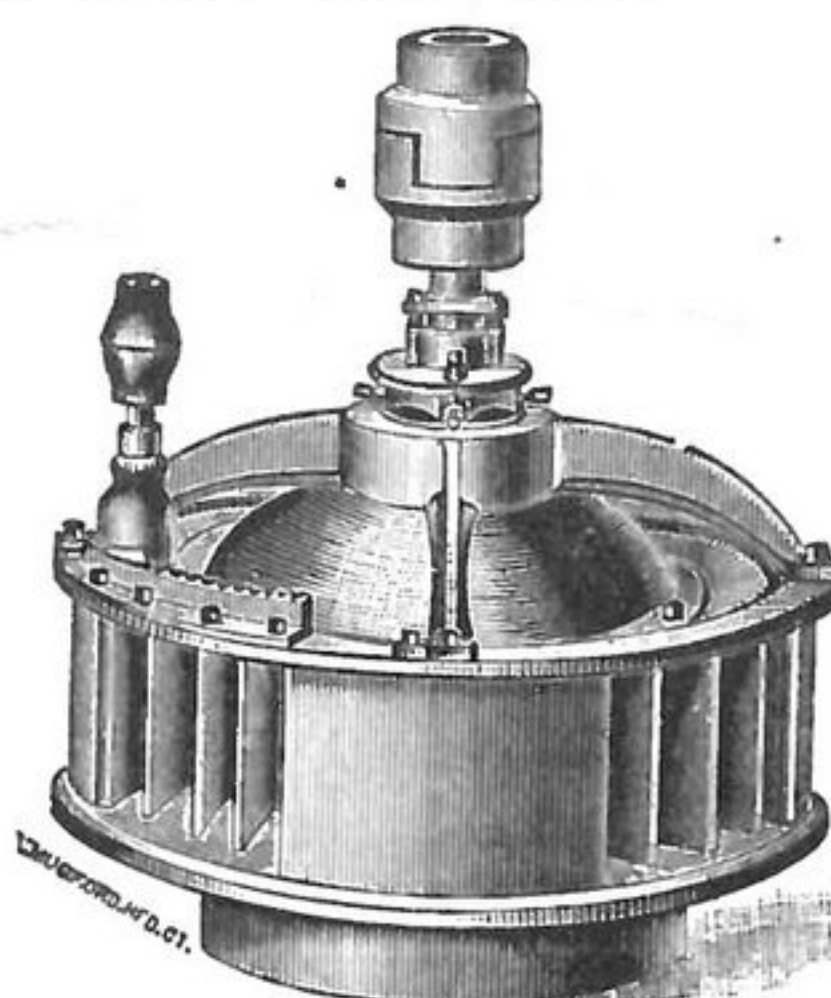
"The best satisfaction in quantity and quality."—CHILD'S ELEVATOR, Manchester, Ct.

"We take pleasure in recommending it."—GARLAND LINCOLN & Co., Worcester, Mass.

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The Improved National Turbine Water Wheel

The Best for Economy; The Best for Durability; The Best for Power. ONE THOUSAND FIVE HUNDRED NATIONAL WATER WHEELS IN USE Prove that our Assertions are Supported by the Leading Manufacturers in the Country. Send for illustrated catalogue and prices to the manufacturers.



The Case Wheel & Mill Co., Bristol, Conn.

THE SUCCESS

BOLTER AND DRESSER

THE J.B. ALLFREE

TWO-REEL SCALPER

WE BUILD

FLOUR MILLS, CORN MILLS

AND

HOMINY MILLS

KEYSTONE

FOUR-ROLLER WHEAT MILL

ROLLS REGROUND AND REGORRUGATED.

THE ALLFREE AUTOMATIC ENGINE

"THE BEST MILL ENGINE IN THE WORLD."

SEND FOR A NEW ILLUSTRATED CATALOGUE.

ADDRESS, THE J. B. ALLFREE CO.

INDIANAPOLIS, IND. U.S.A.

WE FURNISH

EITHER THE

SHORT, MEDIUM

OR

LONG SYSTEM

THE J.B. ALLFREE

CENTRIFUGAL REEL

THE SUCCESS

CORN MEAL BOLT

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HULLER AND PEARLER

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FLOUR PACKER

ALLFREE'S PATENT

THE KEYSTONE

THE KEYSTONE

FOUR-HIGH

THE CLIMAX

CORN CLEANER

THE LITTLE HOOSIER

BRAN DUSTER

DUFOUR'S

BOLTING CLOTH

SPECIALTY

SHAFING, GEARING AND PULLEYS

FURNISHED AT LOW PRICES

THE J.B. ALLFREE

PURIFIER

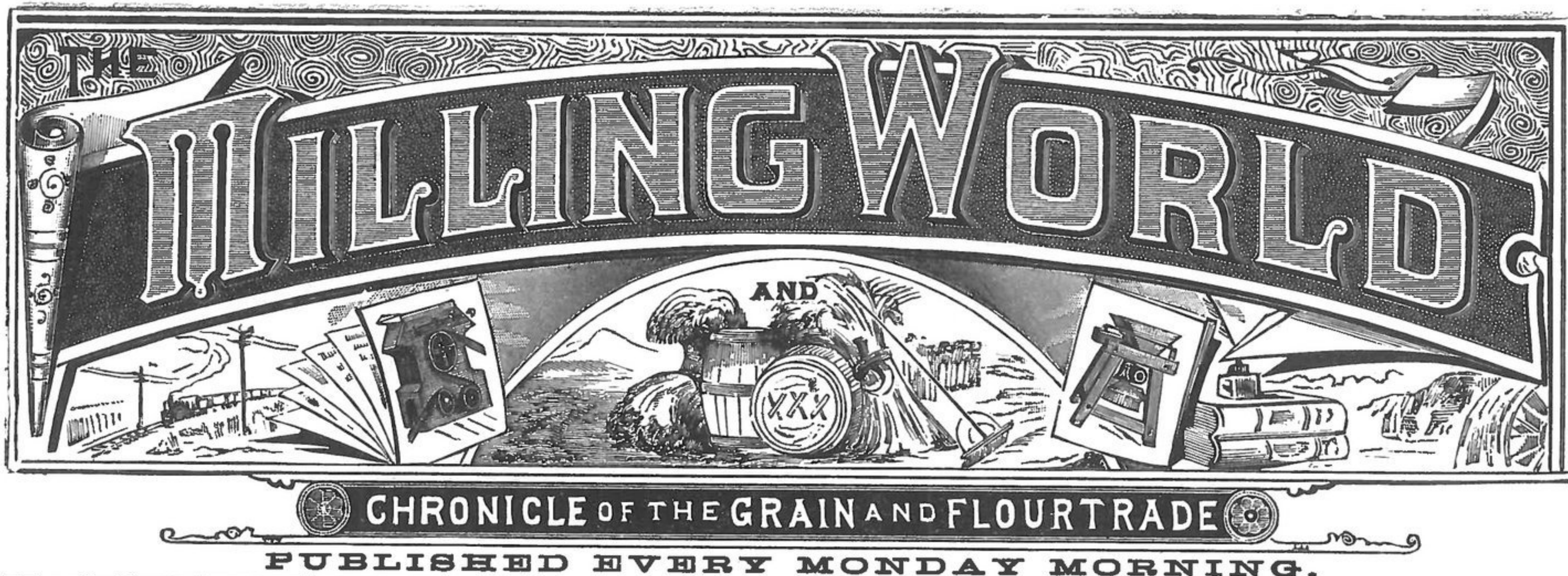
THE J.B. ALLFREE

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CASE.

CASE MFG. CO., COLUMBUS, O.
GENTLEMEN: If we were to build a hundred mills we
would not permit any other than the "CASE" roll to
enter them. They are the best roll on earth.
Yours truly,
W. C. MANSFIELD & CO.
CLEVELAND, TENN., AUG. 29, 1889.
W. C. MANSFIELD & CO.,
MERCHANT MILLERS,

CAES.



VOL. XXI. No. 7.

BUFFALO, N. Y., OCTOBER 14, 1889.

\$1.50 PER YEAR.

THE great milling towns of the United States are increasing their output largely since the new wheat has been available. At this time many of the most important mills are running beyond all former records, and the increase in the aggregate production of flour must be very great.

ACCORDING to the trade-journals of the South, that section has started over 100 new grist and flour mills during the first nine months of 1889. Southern flour-consumers will soon be almost totally supplied by southern millers. It is well. Let the New South boom her milling and grain-growing industries.

ONE hundred inquiries sent out, half to winter-wheat and half to spring-wheat millers, asking for information concerning the quality of the new wheat, bring eighty replies. From these replies it appears that the quality is all that could be desired. Seventy answer that the new wheat is far better than the grain of the past few years, and the other ten say that what they have ground is "up to a high average." In not a single reply received is there a condemnation of the wheat. Some report "too plump," or "too much starch," or an excess in some other particular, but on the whole the evidence shows that the wheat generally is plump, large, smooth, sound and easy to mill.

EVERY year it becomes plainer that the chief office of the Indian wheat carried to Great Britain is to hammer down the prices of other and better wheats imported into that country. The total amount of the Indian wheat sent out has never exceeded 40,000,000 bushels in a single year, and the average is not over 23,000,000 bushels a year, and even of that amount Great Britain does not use more than half, unless compelled to. She ships it to the continent after it has been used as a speculative "bear" hammer, and she then buys the better wheats whose values she has pounded down with the nasty Indian stuff. American wheat-owners will one day understand this move on the part of the British brokers, millers, dealers, agents and consumers, and when once they do understand it they will make an effort to hold their grain long enough to test the sincerity of the boasted British satisfaction with Indian wheat. The withholding of American supplies is the key to the situation. Over-haste in forwarding American supplies gives the key of the situation to the Britons.

ONE of the subjects that should be thoroughly discussed in the American Congress this month is the levying of hostile duties on American flour by South American countries. The aim of that duty is to foster European capitalistic enterprises in South America. As the United States buys from South American countries many times as much as she sells to them, the flour duty may be considered a direct hostility, without cause, or reason, or excuse. The millers of the United States should make a strong showing of their case to the international congress, and to our national Congress also. All the nations that have trade relations with the United States wish to have the best of the bargain, and up to date they seem to have had the best, even to the smallest,

meanest and most insignificant among them. It is time for our government to re-adjust the trade relations of the United States with many of the countries from which we have been taking much and to which we have been sending little or nothing. Uncle Sam has long been over-generous to all. It is now time for him to be just to himself.

AN ancient report of the Fire Marshal of Boston, Mass., sets forth the following causes of specific fires in Boston during January, 1875: 1. "Boy with lighted paper looking for leak in gas pipe. He found it." 2. "By candles furnished for a wake not being long enough to last until daylight. Only damage to canopy and corpse." 3. "By a spark from hammer in driving nail." 4. "Supposed to be the result of a quarrel between landlord and tenant." 5. "Carelessness in the use of a lamp in the hands of an insane man." 6. "Matches being given to a child four years old to play with under store counter; set fire to paper bags." Oddly enough these reports read, but the causes of fires nowadays are quite as odd and insane. The miller who pokes naked lights into dusty corners, the wood-worker who insists on smoking in a room full of shavings and inflammable dust, the miner who carries a naked light into gassy passages, the mechanic who throws fire carelessly around in oil-soaked wooden buildings, the engineer who fails to keep his boiler in shape, all these are men who cause fires in a manner quite as insane as the Boston reports can show.

ACCORDING to recent indications, the wheat crop of the United States is at least 500,000,000 bushels. Last year the alleged crop statistics gatherers scraped up a crop of 415,000,000 measured bushels, which, on account of inferior quality, they scaled down to 391,000,000 weighed bushels. From that crop the home consumption, the seeding, the exportations and the visible supply at the end of the last crop year took about 490,000,000 bushels, and there is yet a considerable quantity of 1888 wheat scattered around through the country. Query: If a 391,000,000-bushel crop furnishes 490,000,000 bushels for use, when the wheat is of a very poor quality, will a 500,000,000-bushel crop of good and fine wheat furnish 600,000,000 or 620,000,000 bushels for use? One year of observation will convince any person that the wheat-crop statistics of the United States need a great deal more labor and care in compilation than they have ever received, if they are to be made even approximately correct. It is open to serious question whether even the "official" total of the crop of 1888 was within 75,000,000 bushels of the real total, and this year the error may be over 100,000,000 bushels. No better things are to be expected until the government takes hold of the matter in earnest and adopts a system of township, county and state compilation of actual acreage, instead of the guess-work of a man here and there on horseback or in a carriage riding through a county and "estimating" the crops on land of which he does not see a thousandth part. Under a correct and comprehensive system each farmer would report acreage and condition to some county-seat agent, who in turn would forward the reports to the state capital, and in that way, and that way only, a correct compilation would be secured.

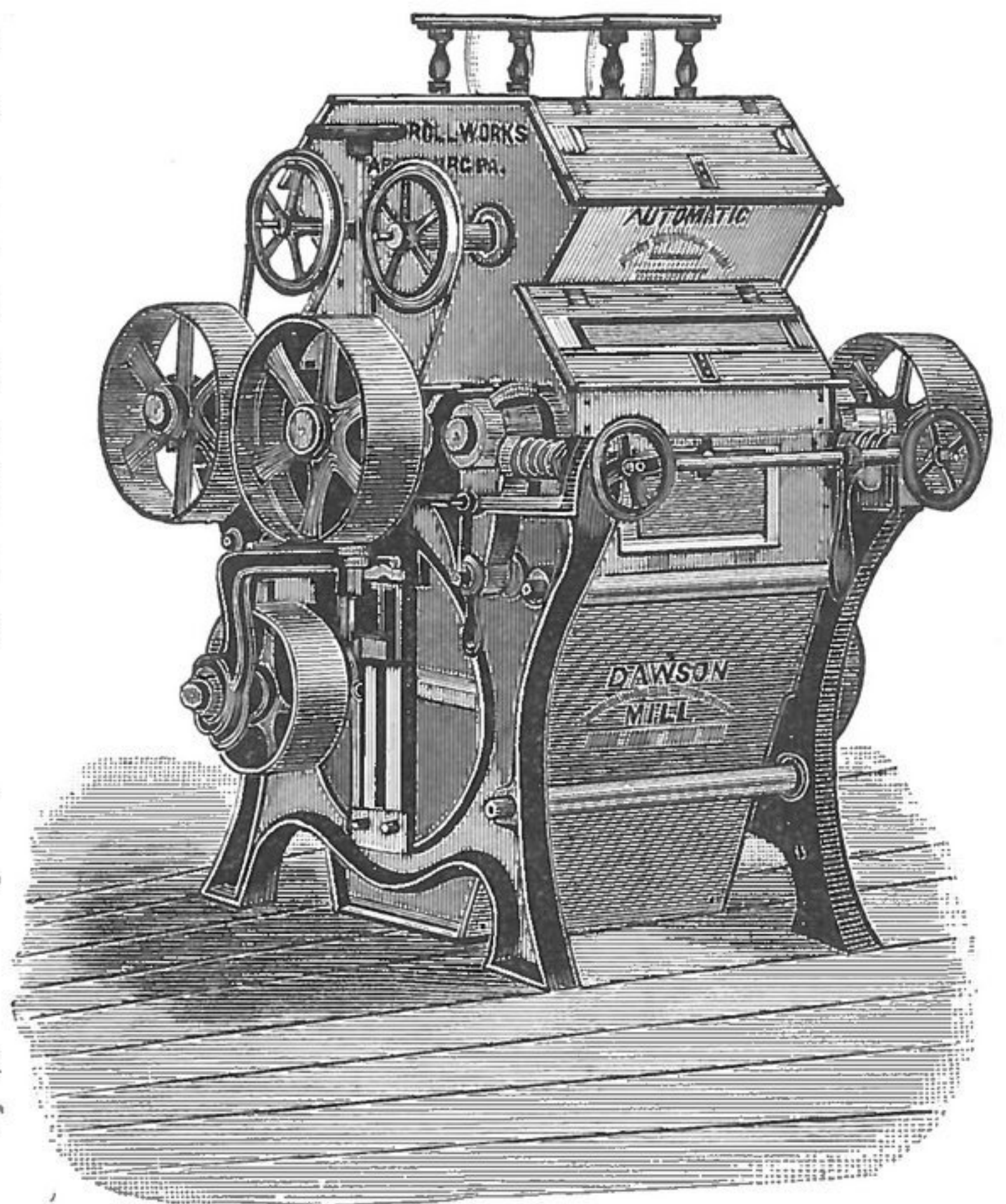
Dawson's Roller Mill

Is acknowledged to be the very best in the market. It has our Patent Automatic Centrifugal feeder, never failing to feed the stock the full length of rolls in an even sheet. It is the Latest and Best feed out, uses less power and is simple in construction. It can be placed on any style of machine with little expense. We use for roll bearings phosphor-bronze metal which will admit rolls being run at any speed without heating and with little friction, and uses little oil. We use the Dawson Corrugation, which is admitted the best in long or short system mills as the action is granulating rather than CUTTING.

We have a large plant to Re-grind and Re-Corrugate Rolls.

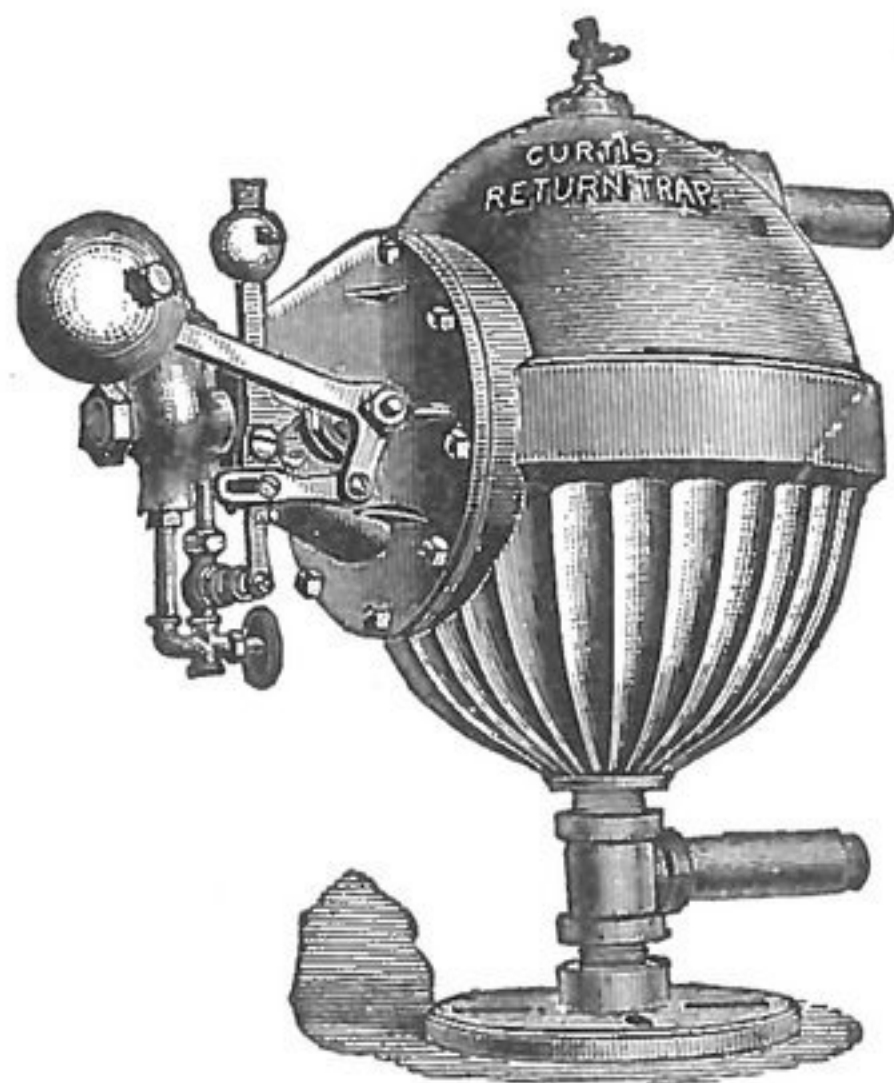
Owing to our late increased facilities and central location we are enabled to ship goods promptly on the shortest notice.

PARTIES CONTEMPLATING REMODELING THEIR MILLS OR BUYING ANY ROLLER MACHINES ARE REQUESTED TO PUT THEMSELVES IN CORRESPONDENCE WITH US.



FOR PRICE LISTS AND CIRCULARS, ADDRESS,

Dawson Roll Works, Harrisburg, Pa.



THE CURTIS PATENT RETURN STEAM TRAP.

It is noiseless, positive, rapid, will return all condensation back into the boiler, and works equally well in connection with reduced pressure or exhaust steam, also when the return is below the water line of the boiler.

THE CURTIS REGULATOR COMPANY,
NO. 74 BEVERLY ST., BOSTON, MASS.

GENERAL AGENCIES.

NEW YORK, 109 Liberty st.	CHICAGO, 218 Lake st.
PHILADELPHIA, 2035 N. Front st.	ST. LOUIS, 511 WALNUT ST.
MINNEAPOLIS, 210 S. Third st.	NEW ORLEANS, 21 Union st.

L. L. WHITLOCK,
Advertising Agent

FOR MANUFACTURERS.

TRADE JOURNALS A SPECIALTY.

P. O. DRAWER 5323. *Boston, Mass.*

As Agent for Advertisers instead of Papers, I obtain the Best Rates Possible for my Customers.

The Canton Cabinet Filing Case Company, Canton, Ohio.

MANUFACTURERS OF

The New Buckeye Document Case & Letter File; Also All Kinds Office Furniture



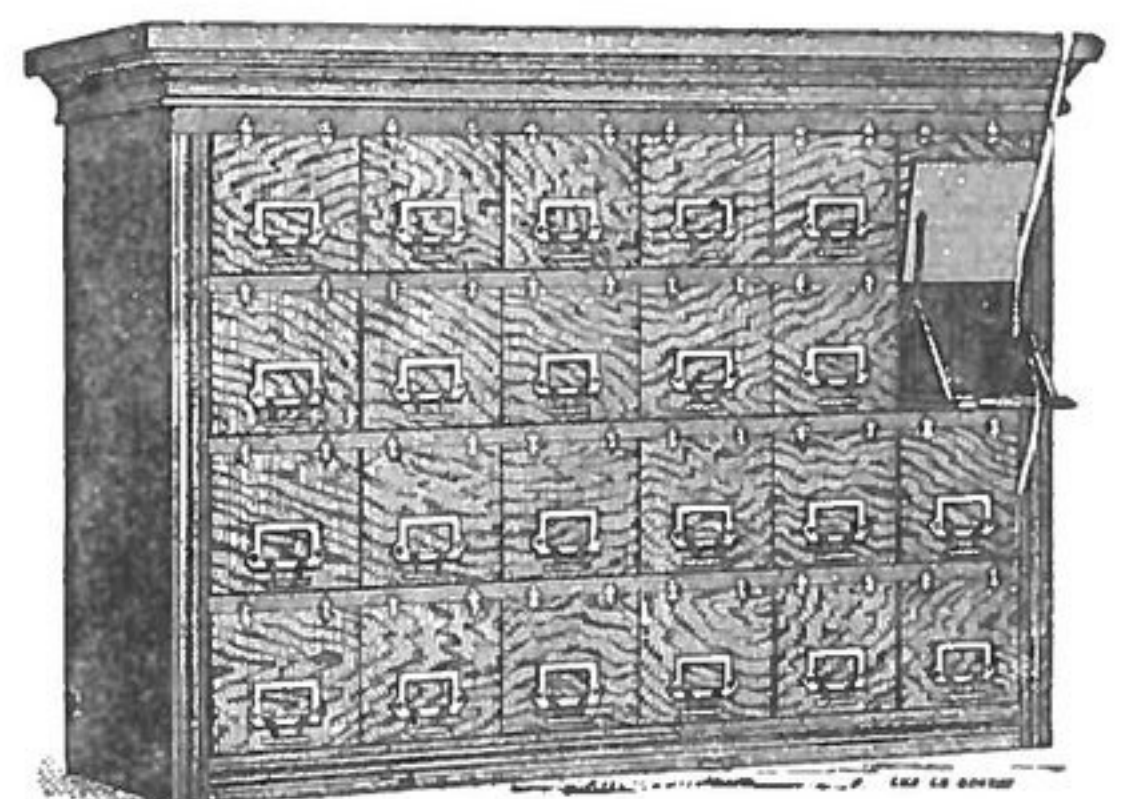
NO. 8.

NO. 8 Represents one side of one of our Revolving Cabinet Letter Files and Document Cases Combined. It contains 30 Document Drawers and 8 Letter File Drawers. In filing letters we use first VOWEL of name on front of drawer, and LETTER FOLLOWING first VOWEL on Index Sheet within drawer. We also make more exhaustive systems which contain from 6 to 100 or more Filing Drawers.

NO. 1 Represents one of our small Document Cabinets, for use on desks or brackets. Action of drawer can be seen in the cut. When front is raised inner drawer comes forward, exposing contents of drawer for inspection.

Our Cabinet Files are Conceded to be the Most Convenient of Any in the Market. They are Compact, Simple, Complete, Durable and Ornamental.

SEND FOR PRICE LIST AND CATALOGUE.



NO. 1.



PUBLISHED EVERY MONDAY. OFFICES: { Corner Pearl and Seneca Streets,
Over Bank of Attica.
McFAUL & NOLAN, - - - PROPRIETORS.
THOMAS MC FAUL. JAMES NOLAN.

SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in unregistered letter at sender's risk.
To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.

Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

ADVERTISING.

Rates for ordinary advertising made known on application.
Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisement taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.

Orders for new advertisements should reach this office on Friday morning to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.

This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.

Address all communications

THE MILLING WORLD,
BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order. Four consecutive insertions will be given for the price of three.

WANTED.

Western New York, Ohio and Pennsylvania mills in want of a temperate miller, with 20 years experience, should write to the undersigned, who is now running a first class mill, but would like to make a change this fall. Address, W., care of THE MILLING WORLD. 56

SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 3 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office, 10 cents must be added to pay postage.

FOR RENT.

Water power grist mill. Three run stone, fair order. Good opportunity. Require but little capital. Apply to M. D. OLNEY, Irvine, Warren County, Pa. 69

FOR RENT.

Clifton Mills, at Black Rock, Buffalo, for rent on reasonable terms, recently repaired and put in good order. Apply to CHAS. DANIELS, over 311 Main Street, Buffalo, N. Y. 6tf

FOR SALE.

Several good second-hand and new turbines of various styles. Second-hand price list and descriptive matter and prices of our new machines sent free. Every one interested in the shortest route to successful milling on rolls or in grinding corn and feed with the least expense of power, should address us before buying.

8tf

FLENNIKEN TURBINE CO.,
Dubuque, Iowa.

MILL MACHINERY FOR SALE.

One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.
One 20-Inch Under-Runner Portable Mill, French Buhr Stone, capacity 10 to 12 bushels per hour; new, best make.
One 14-Inch Vertical Feed Mill; best make, new, a bargain.
One No. 6 Dustless Separator; new, a bargain.
One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.
Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.
Three No. 1 Corn Shellers, capacity 200 to 300 bushels per hour; new.
One No. 2 Purifier. New. Best make. A bargain.
For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf

M-I-L-L-E-R-S

Wanting Bolting Cloths should write for discounts on same before purchasing elsewhere to

SAMUEL CAREY,
71 Broadway, New York.

WANTED.

A miller who can purchase an interest. Business rapidly increasing. Must enlarge mill and add machinery. Only mill in this, Gray's Harbor, region. Good water-power. Address, REV. HIRAM F. WHITE, Elma, Chehalis County, Washington Territory. 710

THE company of American working men and women, who recently made a tour of Europe, report that at Paris they saw milling machinery displayed as "the very latest" in its line. Examination convinced a Minneapolis milling engineer, Mr. Cheeney, who was a member of the company, that most of "the very latest" machines on exhibition are of styles that were long ago known and employed in the United States mills, and that have been discarded for other and more valuable machines of more modern make. It is hard for European engineers and manufacturers to understand that the American engineers and manufacturers are really in the lead, but it can not be successfully denied that they are. The company alluded to returned to the United States satisfied that this is the best of all countries for the working man.

PARTICULAR attention is called to the open letter of the Case Manufacturing Company, of Columbus, Ohio, to the milling public, which appears in another column. The Case Company propose to stand by their patrons in any event, a decision that does them infinite credit. Attorney Leggett's opinion on the Gray patent is an interesting indication of what an able and experienced patent lawyer thinks about that case and its probable ending in the Supreme Court. There are signs multiplying that the manufacturers outside of the consolidation are preparing to fight the broad claims of that concern. They claim that all the roller-mills of any importance made in the United States are covered by the various patents owned by them. That claim means for other manufacturers the complete surrender and abandonment of the field, the payment of royalties to the claimants, or a long, bitter, determined contest. It seems probable now that the outcome will be a contest, with the whole field against the Consolidated Roller Mill Company.

CERTAIN professional guessers are guessing, and announcing their guesses as though they were statements of facts, that there is really in the United States to-day "a scarcity of good milling wheat," and that the scarcity "will increase every month until we make another crop." It is absurdities, imbecilities of that kind that make the public too tired even to laugh at the oracular owls who pretend to know what is beyond the power of any man to prove under the existing circumstances. Here we are, a year and more away from the "disastrous failure" crop of 1888, and no one knows what that crop was, and yet these 1889-crop-owls are gravely counting the last kernel of this crop before the threshing is completed, and they are giving all sorts of information about its inferior quality, while real millers, who are grinding it, assert that it is very fine in quality, and all the statistical conditions prove that it is very abundant in quantity. Of all the frauds and faddists in the world, the crop frauds and faddists are the most detestable.

ARGENTINE Republic seems to be making rapid strides towards serious financial disasters. Late reports from that supposed-and-declared-to-be booming South American country announce a premium of 129 on gold. That means that the paper dollar of the Argentine Republic, which is an index of the popular confidence in the government's ability to redeem its promises to pay, is worth only 43 cents in gold. That startling fact does not augur well for the Argentine Republic. A collapse just now will prove a serious check to the development of the railways and the grain-growing capacity of the country. It is also announced that the condition of affairs during the past year has discouraged many of the new citizens of Argentine, and that, in place of a large increase in the acreage sown to grain for the next crop, the acreage will fall below that of the last crop season. Evidently the Argentine Republic, while possessing an area, a climate and a fertility that promise great things, must develop her resources as other nations do and have done, gradually, regularly, without feverish booms, wild speculation and other unwholesome insanities.

POINTS IN MILLING.

OCCASIONALLY a miller or a milling writer will protest that too much stress is laid on some particular point. One such point is the cleaning of wheat grain before sending it to the break-roll. A great deal has been said and written on this point. Probably too much has been said to please the easy-going, who can never see the need of carrying work to perfection, but any careful observer, who goes about meeting millers and visiting mills, watching the work and listening to the complaints of the flour-makers, will soon find out that enough has not yet been said, or else that those concerned most directly have not heeded properly what has been said, about the cleaning of grain.

IN other words, in spite of the almost perfect machines now to be had for grain-cleaning, in spite of the general knowledge of the benefits to be derived from using those machines that prevails, there are still scores, hundreds of mills in which the work of cleaning wheat is only half understood, or, at least, only half done. In these mills the grain goes to the rolls with its impurities clinging to it, and the impurities are bound to appear again when it will be too late to get rid of them at all.

THE flour made in such cases is sure to be specky, bad in color, unsatisfactory in bread-making. The utmost care in grinding grain can not result in good flour unless all the steps are properly taken, and if the first and most important step be neglected, it will be impossible to make up for the neglect at any future point in the work.

FLOUR-MAKING is simply one continued process of separating the flour in the berry from what is not flour in it. The coating of the berry, the black matter folded in the seam, the fuzz, the awn, the smut, the rust, or whatever else may be attached to the coating, must be separated from the flour. The separation begins on the threshing-floor and should not end until the last practicable degree of separation or purification is reached.

THE ideally clean grain means easy and perfect flour-making. Half cleaned grain means bad flour. These two things are indisputable, however much their repetition may be deprecated.

I HAVE seen grain going to the rolls or the buhrs that was not cleaned at all, in the proper sense of the term. In one case I called the attention of a miller to the fact, and he remarked in return: "O, well! That grain is pretty clean, and I don't see the use of wasting work on grain that is as clean as that. It has been through that ——— scourer, and I don't believe it would pay to buy another cleaner or to run it through this one again."

I TOOK a handful of the grain and asked him to put his glass over it and see how far it was from being clean. Naturally enough, he had no glass. He was without the simplest means of deciding whether his grain was properly cleaned or not, and that, probably, was the reason why he was so sure that all was as it should be. I took from my pocket a glass, a strong one, by the way, and placed it over some of the grain spread out on a sheet of paper. I was surprised to see how dirty the wheat really was. It was far dirtier than the naked eye showed it to be. One glance through the glass was enough to startle that complacent miller.

"GREAT guns!" he exclaimed, "have I been grinding that sort of stuff all this time? Now it is easy to see why my flour is sometimes so dark and spotty! I guess I'll make a change, somehow, somewhere!"

HE at once saw the value of doing something. He had his eyes opened. He has now become what the fatigued anti-over-cleaning writers call a "wheat cleaning lunatic." That mill is now equipped with machines that will clean

grain, and they are carefully employed. That miller now looks through a simple lens into a very large world which had hitherto existed only in imagination to him. His flour is now all that could be desired, and his work is far easier and more certain to bring good results than he had ever thought possible.

SOME machines, that are said to clean grain, really clean it only imperfectly. No machine cleans it absolutely, because no machine can be made to remove the dark substance folded in the crease of the berry. It will not do to start in with the idea that thorough cleaning will be achieved by smashing, splitting, breaking, gouging, bruising and knocking the grain violently about. Ideal cleaning means the gentlest possible treatment that will remove the deposits and growths upon the coating. It means treatment that leaves the coat itself intact. Rude contact, under pressure or high speed, with stiff brushes or gritty surfaces means damage to the grain, and that damage increases as the successive steps are reached. If the damage begins with a system of cleaning that breaks the grain and makes flour, there is loss to start with. In such a case the rolls find the grain in such shape that they must reduce it too much. Flour is made again before it is wanted, and it is sure to be so mixed with dirt that it can not be recovered. Thus at each step the loss set up at the start is maintained. It is easy to see where and what the end must be.

THE wheat of 1888 was a grain that made particular demands upon the cleaning-machines. The grain of the present crop is an improvement in this particular, but, even with a fine berry to handle, there is still the necessity for great stress on the grading and thorough cleaning of the grain. The tendency is naturally toward cleaning too little. In not one mill in the United States is there a tendency toward cleaning too thoroughly.

ROLLER MILL PATENT LITIGATION.

During the past three months we have received over four-hundred inquiries from millers in different states, each asking for definite information concerning the roller-mill patent litigation. We have published the doings of the Consolidated Roller Mill Company and of their opponents, together with the intentions and aims of both sides, which have been expressed by representatives of both sides, and herewith we present another important and interesting contribution to the fund of information. This time the communication to the public comes, not from the Consolidated Roller Mill Company, nor from the firms who are combined to oppose the claims of that concern, but from a reputable house well known to all our readers. Here is their outspoken communication:

OFFICE OF THE CASE MANUFACTURING COMPANY.
COLUMBUS, OHIO, September 30, 1889.

To the Milling Public: You are all aware of the suit brought by The Consolidated Roller Mill Company against certain mill-owners using rolls made by manufacturers not in that combination. No suit has been brought against any one using our rolls, nor has any claim been made on the part of The Consolidated Roller Mill Company to us that we were infringing their rights. We should not feel called upon to notice this matter in any way but for the fact that the circular of The Consolidated Company, lately issued, calling upon mill-owners for settlement, has in some instances been sent to our customers. We are well aware that we are not infringing any patent and our patrons need not be troubled; but lest any of our customers should be disturbed by these circulars, we have had our patent attorney, Gen. M. D. Leggett, of Cleveland, Ohio, make a thorough examination of all patents on roller-mills, and we give herewith his written opinion that our machines do not infringe any patent. Gen. Leggett's known eminence as a patent attorney will be sufficient guarantee to the mill-owners of this country upon this matter, and in addition to this we stand ready to defend any suit for infringement brought against any one using any machine of our manufacture.

THE CASE MANUFACTURING COMPANY.

Following is the opinion of General M. D. Leggett, formerly United States Commissioner of Patents:

CLEVELAND, OHIO, September 21, 1889.

The Case Manufacturing Co., Columbus, O. GENTLEMEN: After a careful examination of your mill rolls and also a like careful examination of the various patents that have been issued upon roller grinding-mills, I am clearly of the opinion that you do not infringe any patent. In form-

ing this opinion I have read and studied the opinion given by Judge Brown, of the United States Circuit Court for the Eastern District of Michigan, in the case of The Consolidated Roller Mill Company vs. Coombs. In that case Judge Brown sustains the Gray patent, No. 222,895, of December 23, 1879, and declares the Coombs rolls to be an infringement of said patent. In thus finding Judge Brown has exercised the very utmost extent of liberality in construing the claims of the Gray patent, and I think he has extended a liberality beyond a point where the Supreme Court will follow him; but even with this utmost stretching of the claims they do not and can not reach your rolls. In coming to this conclusion, I have given the matter much reflection and investigation, but I can find nothing which gives rise in my mind to a doubt as to the correctness of my conclusions. Very respectfully,

M. D. LEGGETT.

RUINED ENGLISH WHEAT GROWING.

Britons may boast that they have "developed" wheat-growing in India and other countries, but they can not deny that the "development" has cost British agriculture very dearly. Recently some British farmers have printed figures showing, or meaning to show, that at 30 and 32 shillings per quarter there is still profit in growing wheat in England, but now comes another one, Mr. W. Biddell, of Cavershall, Suffolk, who publishes in the London "Standard" the following statement of growing an acre of wheat, with the receipts from the same, for the season of 1889:

EXPENDITURE.			
	£	s.	d.
Ten tons of manure.....	3	0	0
Ploughing and tillage.....	0	15	0
Drilling and seed.....	0	10	6
Hoeing and weeding.....	0	5	6
Manual labor harvesting.....	0	12	0
Horses and carriages, carting.....	0	2	6
Thatching materials for thatch and stack bottom ..	0	5	6
Threshing and dressing.....	0	10	0
Selling and carting to market.....	0	5	6
Rent, tithe and rates, per net acre.....	1	10	0
Interest on capital.....	0	8	0
Total cost.....	8	4	6
RECEIPTS.			
	£	s.	d.
Estimated crop, thirty bushels, which, as it would include the inferior grain not brought to market, I put at 3s. 6d., thus realizing.....	5	5	0
Add for straw and chaff.....	1	10	0
Total.....	6	15	0

From the above it will be seen that the ultimate and direct loss comes to 29s. 6d. per acre. To this should be added something for the land being in a more exhausted state when the wheat is removed than when preparations for it were commenced. Mr. Biddell adds: "With the present high price of meat, if corn growing was not very unprofitable, we should not have thousands and thousands of acres of land now to be let in this country at less than two-thirds of the rent it would readily let for 12 years since."

Commenting on this showing, another grower, F. S. Corrance, of Parham Hall, says: "We gain nothing by overstating our case. It is very rarely that I should venture to differ with Mr. Biddell on a practical point, but he has certainly overstated the outgoings on an acre of wheat. In the first place, neither in West Suffolk nor East can 30s. be accepted as the normal outgoing on rent, tithe and rates. The very best land does not command this, 20s. might be nearer the mark. The cost of manure should not be all charged to the wheat crop, but divided and spread over the succeeding crops until the next manuring takes place. In each of these other items there is so much difference, even in the same county, depending on soil, distance to market, wages, condition of the land, that no reliance can be placed on a general estimate. The charge for interest on capital is misleading and can only be allowed in the sense of deterioration of dead stock; otherwise the interest on a farmer's capital is, as in all other trades, the annual net profit on the capital invested or sunk, and must be placed to the credit account. Hence I have never yet met a practical farmer who could tell me what it really cost him to grow an acre of wheat. No statement I have ever seen would bear pulling about, and if this applies to individual cases, how much more does it apply when we attempt to generalize. This much may be said, wheat at 30s. per quarter can not be a paying crop, except

on a certain class of land and under certain required conditions. When these are absent, wheat cultivation will presently cease. Since 1874 1,000,000 acres have thus gone into grass or other crops. Assuming two men per 100 acres, a very moderate computation, to have thus been displaced, we shall have 20,000 laborers thrown upon dock or other unskilled work. Mr. Biddell correctly and with great knowledge speaks of the breadth of land now unlet. He might add to this at least as much more being slowly and surely ruined by tenants who are past hope and insolvent, but whom the landlord dares not displace."

Thus, while British millers and economists are boasting that they have made the wheat-lands of the whole world their source of supply, the fact remains that they are reducing Great Britain more and more to a condition of dependency upon foreign wheat, and thereby making her condition all the more perilous in case of the breaking out of one of the great wars that are ever probable in Europe. It is perfectly easy to see how a war of a single year, involving several of the great maritime Powers, would produce a bread famine in Great Britain, or would, at least, make the transportation of bread supplies from distant lands to Great Britain so perilous and so costly that prices would be so high that the poor and middle classes would be unable to eat bread at all. Great Britain is now consuming cheap bread, for which she may pay dearly in the future. It can not be considered a wise policy that breaks down domestic agriculture and floods the cities with displaced and pauperized farmers, and yet this is exactly what is being done in Great Britain.

THE NORTHWESTERN GRAIN SITUATION.

According to the estimates of Col. Rogers, editor of the Minneapolis "Daily Market Record," there were in country elevators along the lines of the railroads in Minnesota and Dakota on October first 4,066,000 bushels of wheat in the houses of elevator companies having ten or more houses each. There are several smaller companies whose houses contain in the aggregate 200,000 bushels. There are in addition several hundred small warehouses and independent elevators carrying small quantities each, but in the aggregate put by careful estimate at 300,000 bushels, making in store in country houses 4,566,000 bushels October first this year, against 2,759,000 bushels on the same date last year. There were in transit between shippers' houses and Minneapolis and Duluth what was estimated as three days' shipments and one day's business on track in the yards, making 2,842 cars of wheat, or approximately 1,500,000 bushels altogether in transit, which, added to the stocks in country elevators October first, gives a total wheat supply of 6,066,000 bushels in country elevators and in railroad transit October first, against a total in transit and in country elevators October first last year of 3,912,849 bushels. A very large proportion of the wheat now in the country elevators is stored by farmers. The houses of some large elevator lines contain very little else, they having forwarded their purchases as fast as bought to Minneapolis, to Duluth and to mills along the railroads. The shipments of wheat along the southern lines of roads have mainly gone to mills. Some companies report one-half of their country holdings stored, farmers having sold out this week much they were carrying at the beginning of it. It is shown that the total purchases during this week by elevator companies have exceeded the total amounts received by them from farmers granaries. That is, farmers sold more that was already in elevators than they have hauled from the farms for the last few days.

VIEWS OF WHEAT EXPORTERS.

Following is a communication from one of the principal grain-exporting firms of New York to a prominent Chicago commission house: "We think you overestimate the requirements of England and France. The latest information we have from France is that they will require little or no wheat. England, we figure, requires only about 125,000,000 to 130,000,000 bushels, and for this she has Russia India, Australia, Chili and other countries to draw from. Russia seems to have a fair quantity to sell, judging by her offerings, but is

inclined to want more money for it. India will probably begin shipping again in November, and the Australian, which promises to be a large crop, will arrive in the United Kingdom in the spring. It is true that the quantity on passage has decreased, but it has only changed position and gone into stock on land, as the arrivals lately have been a good deal larger than consumption. On the other hand, the consumptive demand is good, and from Liverpool we get a good healthy tone with prospect of improvement. The stock of Californian on hand and on passage is very moderate and well owned. This is the speculative wheat of Liverpool and is the first to show change of tone and generally leads the way. When it gets too high, as in 1887, millers go off it and take to Indian, from which they get color for their flour. You see English millers don't use a straight grade by itself, like American millers, but mix their wheats so as to get the required flour. For instance, suppose American red and Californian to be out of reach, they would use Russian for strength, Indian for color and some strength, and English for flavor, and make a capital flour. At present we are too dear for the United Kingdom, but if we could only keep steady for a time, we think they would come towards our prices and there would be a good chance for export. For us to weaken much would discourage and weaken them, while to go up too rapidly would only make a market for Russian and Indian. Our experience is that it is very rare for foreigners to take delivery of wheat on options and ship it."

BRITISH HOSTILITY TO AMERICAN WHEAT.

Recent events and utterances in Great Britain reveal an intense hostility to American wheat in that country. The Paris meeting of the British and Irish millers was the occasion for an outburst of that hostility. Mr. C. J. Murphy, the projector of the Indian corn exhibit at Paris, describes the occasion, in a letter to "The Millstone," as follows: "I was surprised at the great hostility manifested toward our American wheat. Mr. R. H. Appleton, the president of the association, made a powerful address, the burden of which was intense hostility to the use of American wheat, insisting that every means be used to drive it out and use the Indian wheat instead. He advocated the policy of assisting India to build more railroads in order to transport their wheat at a lower rate of freight to the seaboard, as it costs only 5s. English per quarter to raise wheat in India, while it costs 13s. per quarter in Dakota; but the United States had 90,000 miles of railroads in 1880, when they had in India but 10,000 in the same year, and labor is cheaper there than in any other country in the world, while in the United States it was the dearest. He also gave another reason why they should not take our wheat, and that was that our protective tariff was so high they could not pay us in their manufactured goods, but were obliged to pay in British gold, when India would take their pay in goods, and they hoped the time would soon come when they could be independent of the United States for their wheat supply. The whole burden of their song was how to down United States wheat."

Evidently the National Association of British and Irish Millers is drifting more and more into politics, and the faster and farther it drifts in that direction, the sooner and the more infallibly it will lose even the small influence it now possesses. The real secret of the English hostility to American wheat lies in President Appleton's utterance about the American tariff, but so long as India retrogrades, so long as Russia fails, so long as Austro-Hungary has regular shortages, so long as Australia is scourged by drouth, and so long as Argentine Republic and other competing countries, from one cause or another, fail to grow enough wheat to supply Great Britain, so long the British millers must and will continue to grind American wheat. Supposing Mr. Appleton's idea to be carried out, and all the Indian crop imported into Great Britain, and all the British mills grinding Indian and home-grown wheats, what would the result be? A supply of flour so poor, so nasty, so unsalable and so unsatisfactory that the consumers would turn in a body from its use and import American in its stead. If the population of the United States increases in the next twenty years as it has

increased in the past twenty, the question of grinding American wheat in British mills will have settled itself in the negative in spite of Mr. Appleton and all free-trade or protective tariff systems. Meanwhile, the British consumers, who are taught that it is the proper thing to buy the best article where they can buy it most cheaply, will go right on buying fine wheat and fine flour from the United States right up to the time when the population of this country shall be large enough to consume all the grain grown here.

A NEW THEORY OF WHEAT RUST.

Discoveries are always in order. Among the most recent is the discovery of the origin of "rust" on wheat. It is promulgated by a man who, singularly enough, calls himself "A. H. Going." In a letter to the "American Miller" he sets forth his discovery as follows: "Rust is known to have troubled the human family for at least 3,000 years. Strange that it should fall to my lot to point out its real cause and nature, which is this: You will observe that rust is never seen on the ear, and that it always appears within the three weeks preceding maturity. At this time nature is doing her biggest work, filling the grain. That wonderful and mysterious pump, which pumps the sap through the sap cells into the grain, is in full force. From unsuitable conditions of soil or atmosphere there is an excess of moisture, the cells are not able to stand it, the "hose bursts," the innumerable sap cells are ruptured. The sap oozes out, at first a colorless liquid; this goes on day by day; the sap accumulates and thickens and finally dries into the red dust which we call rust. Meanwhile the grain is partially or entirely starved. Wheat that should have gone to fill it is distributed over the straw. If you will examine the wheat at this stage, it appears large and full, but it is an empty sack, and when the ripening days come it collapses into the shriveled grain we all know so well to our cost. There you have the whole nature, cause and effect of what is known as rust, and I will call upon every scientific investigator all over the world who may happen to read this article, to satisfy himself whether it is true or false, and push one step further and find a remedy."

Probably Mr. "Going" could find light on a dark subject if he were to take the trouble to consult the work of any scientific investigator on rust, smut and other forms of grain diseases and parasites. It may occur to him, on second thought, that the mere drying up of the plant sap is hardly sufficient to account for the ability of the smut, which he says is formed in that way, to propagate itself indefinitely in a field. If he is "going" to father his own theory, he must be prepared to prove that all other theories of grain smuts are erroneous. Too many things discovered in these days refuse to remain discovered, and the foregoing discovery appears to be one of that class.

CURES FOR THE "MILLERS' COUGH."

Millers, like other workmen employed in places where there are particles of dust constantly floating about in the air, are frequently and in some cases constantly troubled with affections of the bronchial tubes and lungs, which are directly due to their inhaling the dust. The "millers' cough" is a source of great discomfort to him, and not infrequently is he at a loss for some remedy to give him relief. We give below several remedies which have been tried by millers and found to be very effective.

Take the white of an egg and 20 drops of chloroform, mix thoroughly by beating, and whenever the cough is troublesome, take a teaspoonful. This has been found by some to be an excellent remedy. Others have tried patent medicines and recommend Dr. Hair's Asthma Remedy and Burrell's Cherry Balsam.

Another remedy which has proved effective in some cases is as follows: Put 2 eggs in a tumbler, cover them with good apple vinegar; let them stand 24 hours, and the shell will have become soft. Pick the shells and let out the eggs into the same vinegar they stood in, and heat them well. While they are softening put a quarter of a pound of rock-candy

and a large stick of licorice, cut fine, into a quart bottle in which is a pint of apple vinegar. Shake often, and by the time the eggs are ready it will be dissolved. Now put in a quarter of a pound of good brown sugar, and put in the eggs and vinegar and shake well. Then put all into a pan, simmer for 24 minutes, and when cool enough put it back into the bottle, strain and add 10 cents' worth of syrup of squills. One pint of vinegar with the eggs and a pint with balance is just enough for the whole. Take a large teaspoonful frequently through the day, say 8 or ten times, and in a few days asthma will begin to leave, and a cold and sore throat will go at once.

An Eastern miller informs us that after suffering a number of years he consulted a physician, who gave him the following prescription: Two ounces of pepsin, a half drachm of nitric acid and a half drachm of muriatic acid, 2 ounces of glycerine and 6 ounces of pure water. He took a teaspoonful of this 3 or 4 times a day and soon obtained permanent relief.

An inexpensive remedy, which we have heard highly recommended, is the rubbing of Croton-oil on the spine for its entire length. This is to be applied 3 nights in succession, then skip 3 nights, and apply for 3 nights again. In 3 or 4 weeks this will effect a cure. This remedy has been known to cure cases of many years' standing, and it will at least do no harm for millers troubled with a cough to try it.

Another remedy of home manufacture, which is said to have proved effective when other remedies failed, is as follows: Take 3 ounces of skunk-cabbage root and half an ounce of horehound herb; boil together with plenty of water for 3 or 4 hours. Then strain and save the water. Put in fresh water and boil again for an hour or longer. By this time the strength will all be out. Then strain again, put the water all together and boil it until there are about 2 quarts remaining. Then add a pound and a half of good light-brown sugar. Boil down until there is about one quart left. Then it is done. Take one tablespoonful 3 or 4 times during the day or night when troubled with coughing.

A remedy known to most all millers, and which has been tried with good results by many, is a mixture of vinegar, sugar and cayenne pepper, the amounts being a pint of the first, 4 tablespoonfuls of the second and one tablespoonful of the last. By thoroughly mixing and taking a teaspoonful 3 or 4 times a day, a cough will soon be relieved—*Chicago "American Miller."*

THE BREAD-MAKERS OF LONDON.

In England the flour-mills and bakeries are much more closely connected than in this country, and frequently they are combined under one management. The bakers of London may be divided into two classes, the full-price baker and the baker who sells a low quality of bread at a low price. The full-price bakers are as a rule intelligent, well-to-do and prosperous citizens, while the baker who sells a low-priced bread is an ignorant and not a particularly cleanly creature. The operatives number about 18,000. Of these 4,500 are master-bakers and 13,500 are journeymen. Of the master-bakers at least 1,500 are Germans, who have risen from the rank and file. They are frugal, clannish and hold aloof from the ordinary duties of citizens. Of the 13,500 journeymen about 10 per cent. are always out of employment. This large number of unemployed men has a demoralizing effect upon the bakery trade and keeps the bakers from asserting their rights. They work from 80 to 100 hours per week, for which they receive a small salary. The operatives of most all other lines of trade have succeeded in having their hours of labor reduced to 52 or 56 hours per week. The operatives are divided into first, second, third and fourth hands, with wages ranging as follows: First or fore-hands in large shops receive from \$10 to \$15 a week; in small shops from \$5 to \$7 a week; the average foreman's wages range from \$7.50 weekly to \$10; second hands receive an average of \$5 to \$6 a week, and third hands from \$4 to \$5.50. Fourth hands, who very often work 12 to 15 hours a day, are exceedingly fortunate if their wages amount to \$3.50 a week. Boys for cleaning up about the

bakery average \$2 a week apiece. Each man is usually allowed a loaf of bread a day to take home with him, if he sleeps off the premises, but as all who live on the premises in a London bakery are usually allowed to eat as much bread as they require, it is natural enough that the bakers sleep near their ovens. Besides these prices there is also an established custom of perquisites. The foreman, for instance, receives 3 cents from the yeast merchant for every quart of thick brewers' yeast he uses. The 3 cents are charged by the yeast merchant in his bill, so that the money is really paid out of the pocket of the master-baker. The first, second and third hands are allowed by the miller 1 or 2 cents for each empty sack which is returned. The carman who brings the flour charges the master-baker or proprietor 1 cent on every sack of flour delivered, which is returned to the master by the sack collector, who is an officer appointed by the millers.

AMERICAN flour-makers would find their flour going all over the earth if the United States only had a great merchant navy. England, France, Germany and other countries are showing us how to get and maintain merchant navies. They liberally support every enterprise that puts a new vessel afloat. That is precisely what our own government should do. At present Americans are paying British vessels the enormous total of \$150,000,000 a year for carrying their products, and the British vessels that reap that golden harvest on American freights are aided substantially by British subsidies. A fraction of that enormous yearly outlay would set afloat a great American carrying fleet, and with American vessels to push American grain, flour and other products into foreign markets, there would be a steady outflow of all surplus products, better markets at home in consequence, and a generally better condition of business affairs. The millers may well wish for an American merchant navy.

ONE of the most picturesque and remarkable bodies of water in the world is Henry's Lake, Idaho. It is situated on the dome of the continent in a depression in the Rocky Mountains called Targee's Pass. It has an area of 40 square miles, and all around it rise snow-capped peaks, some of them being the highest of the continent's backbone. In the lake is a floating island about 300 feet in diameter. It has for its basis a mat of roots so dense that it supports large trees and a heavy growth of underbrush. These roots are covered with several feet of rich soil. The surface is solid enough to support the weight of a horse anywhere, and there are places where a house could be built. The wind blows the island about the lake, and it seldom remains 24 hours in the same place.

LATE reports indicate that the winter-wheat acreage for 1890 will exceed that of 1889 considerably. Farmers report that the usual signs of insect pests are not visible in the winter-wheat sections.

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A BOILER THAT CAN NOT EXPLODE.—Additional tests have been made of the new French steam-boiler which, it is claimed, is proof against explosion. The boiler consists simply of a solid drawn steel tube which has, with the exception of its two ends, been rolled out flat, so as to leave in it a channel only 0.1 to 0.3 millimeters wide; the tube is then coiled spirally, and its inner end is bent up vertically to receive the steam-pipe, while the feed-pipe is screwed into the outer end of the spiral. This spiral-tube boiler is placed in a furnace which may be of the slow-combustion type, and there is claimed to be no need for either stop-valve, blow-off cocks, gauge-glass or safety-valve. The feed-water upon entering the narrow channel within the tube is instantly converted into steam and issues perfectly dry. Thus, it is asserted, there is no possibility of scale accumulating, owing to the great velocity with which water and steam pass through the boiler; and the calcareous salts held in solution in the water, instead of being detrimental to the proper working of the boiler, are reduced to an impalpable powder and really act as a lubricant.

GENERAL NOTES.

THE total coal consumption of the world is said to amount to more than 1,000,000 hundredweights per hour. of this quantity about 240,000 hundredweights are required per hour in order to heat the boilers for stationary and marine engines and locomotives. The production of pig-iron requires 100,000 hundredweights and that of other metals 80,000 hundredweights per hour. The average hourly consumption of household coal is reckoned at 200,000 hundredweights.

COTEMPORARY COMMENT.

The merchants at the Hamilton Carnival resolved that trade should be restricted to shorter dates and not in any case date invoices ahead, which was a great evil and in the end a detriment to the wholesale man as well as the purchaser.—*Toronto, Canada, "Merchant and Manufacturer."*

It is as clear as any thing can be that the importation into Canada of 265,000 barrels of American flour every year destroys the Canadian farmers' market for upwards of a million and a quarter bushels of wheat. The millers are perfectly content that the farmers should continue to enjoy the protection of 15 cents per bushel on their wheat. What they ask is that American flour shall not be allowed to come in to displace the product of the Canadian farm and the Canadian mill. Upon this common ground Canadian farmers and millers should stand and unite their efforts for a re-adjustment of the tariff.—*Toronto, Ontario, "Electrical, Mechanical & Milling News."*

This paper never attempted to manipulate Mr. Barry. He tried to manipulate this paper a year ago, and we earned his hostility because we pursued what we believed to be the right course, in spite of his demand that we should adopt a course he deemed right. He tried the tactics of a bulldozer on us, when he thought his position as a dispenser of patronage would crown his efforts with success. When that failed, he tried the tactics of a sneak, and the Milwaukee paper lent him its columns, very appropriately, for his purposes. If the dough-faced journals do not like our course in refusing to be bulldozed and lampooned, without protest, we can not help it. We do not think that that sort of a man will make the best secretary for the association.—*Chicago "American Miller."*

There has not been a time since harvest in the history of the present winter-wheat crop when the demand for good milling wheat has been as great as it is at this time and move-

ment so small. This arises largely from the fact that as the season advances it is no longer a question of sentiment but one of fact that a far larger proportion of the winter-wheat was damaged during July to such an extent as to lower the grade and make it unfit for milling purposes.—*New York "Produce Exchange Reporter."*

THE DEADLY PARALLEL IN POETRY.

Following is a communication from "Bang," that cyclonic satirist of Duluth, whose work on milling poets and milling poetry is already familiar to our readers. He says:

Mr. Editor: You are very severe on milling poets and milling poetry in general and particular. Doubtless what you have said about them is justifiable in every point of view. I do not ask you to be more merciful to them, for they deserve all the sarcasm THE MILLING WORLD has bestowed upon them. But I wish to call the attention of the American millers to the fact that all the bad milling poetry is not inflicted upon the millers of the United States alone. I enclose a specimen of that inflicted upon German millers without stint or apology. The original is given first, in German, and then follows a literal translation, word for word. Let your readers judge. Here are the two:

DAS MUELCHEN AN DER LAHN.

Einst zog ein Mueller kreuz und quer,
—Es ist so lang noch gar nicht her—
Durch Bayerns, Schwabens, Preussens Au'n,
Er wollte sich die Welt beschau'n.

So zog er auch den Rhein hinan,
Stiesz auf ein Muehl'chen an der Lahn.
Hier schnallt er rasch den Ranzen ab,
Weil's in der Muehle Arbeit gab.

Dem Knappen es gar sehr gefaellt,
Ihm scheint so golden dort die Welt.
Dies kommt davon, jetzts hoeret fein—
Er liebt des Muellers Tochterlein!

Er liebt das Linchen treu und wahr,
Und bleibet dort wohl Jahr fuer Jahr,
Bis er sie selbst als Preis gewann
Und wurde Lina's treuer Mann.

* * *

Und die Moral von der Geschicht?
Ein Jeder hoeret, was sie spricht:
Was auch erstrebt ein braver Mann,
Ausdauer es erreichen kann.

Walter Koglin in "Deutscher Mueller."

LITERAL TRANSMOGRIFICATION.

THE MILLKIN ON THE BANK.

Once drew a miller cross and slant,
—It is so long yet not at all ago—
Through Bavaria's, Suabia's, Prussia's meadows,
He would himself the world besee.

So drew he also the Rhine up to,
Rose up a millkin on the bank.
Here buckles he quick his knapsack un,
Because it in the mill labor gave.

To the young miller it at all very pleases,
To him shines so golden there the world.
This comes thereof, now listen fine—
He loves of the miller daughterkin!

He loves the Linkin faithful and true,
And stays there indeed year for year,
Till he she self as prize won
And became Lina's true man.

* * *

And the moral of the story?
An every listen, what she speaks:
What also attempts an honest man,
To persevere it accomplish can.

Now, how does that compare with any thing ever perpetrated by any American milling poet? I see by your Indianapolis cotemporary that your Buffalo cotemporary is going to publish some Pennsylvania Dutch milling poetry. Good! You may promise your readers some choices specimens of Welch, Gaelic and American Injun milling poetry. I'll see that they get 'em! There's nothing like having every thing that is done well and thoroughly done.

Bang, Duluth, Minnesota.

A SINGULAR HUNGARIAN SEPARATOR.

An automatic grain-separator, that runs without either motor or spring motion, has been introduced in Austria. A hopper above the machine contains the grain, the weight of which sets the mechanism in motion and keeps the separat-

ing apparatus going until the last handful of grain has left the hopper. The whole construction is very simple. Below the hopper is a closed case, in which an overshot wheel revolves. This wheel is made partly of wood and partly of iron, and on the shaft which rotates the wheel a universal joint is fixed, and by means of a rope pulley the separating-reel is driven. The grain falls from the hopper into the cells of the overshot wheel and causes the same to revolve, through which the motion is transmitted to the rope pulley and from this to the separating reel. As soon as the grain has caused one-half of a revolution by dropping into the cells of the wheel, it falls into the separating-reel, and there it is separated from small grain, round seed and other im-

purities. According to the size of the openings in the separating cylinders, the sizing or separating can be regulated. The angle of this separator can be altered so as to discharge quicker or slower, as may be required, to give more or less separation. The capacity of this separator is 300 to 400 pounds per hour. The small grain and round seeds drop into different partitions underneath the revolving separator, in a similar manner to other separators. This apparatus has commanded a great sale and seems particularly adapted for cleaning grain to be used as seed. There being no motive power whatever required, its operation is inexpensive, while its cost places it within the reach of small land-owners and agriculturists.

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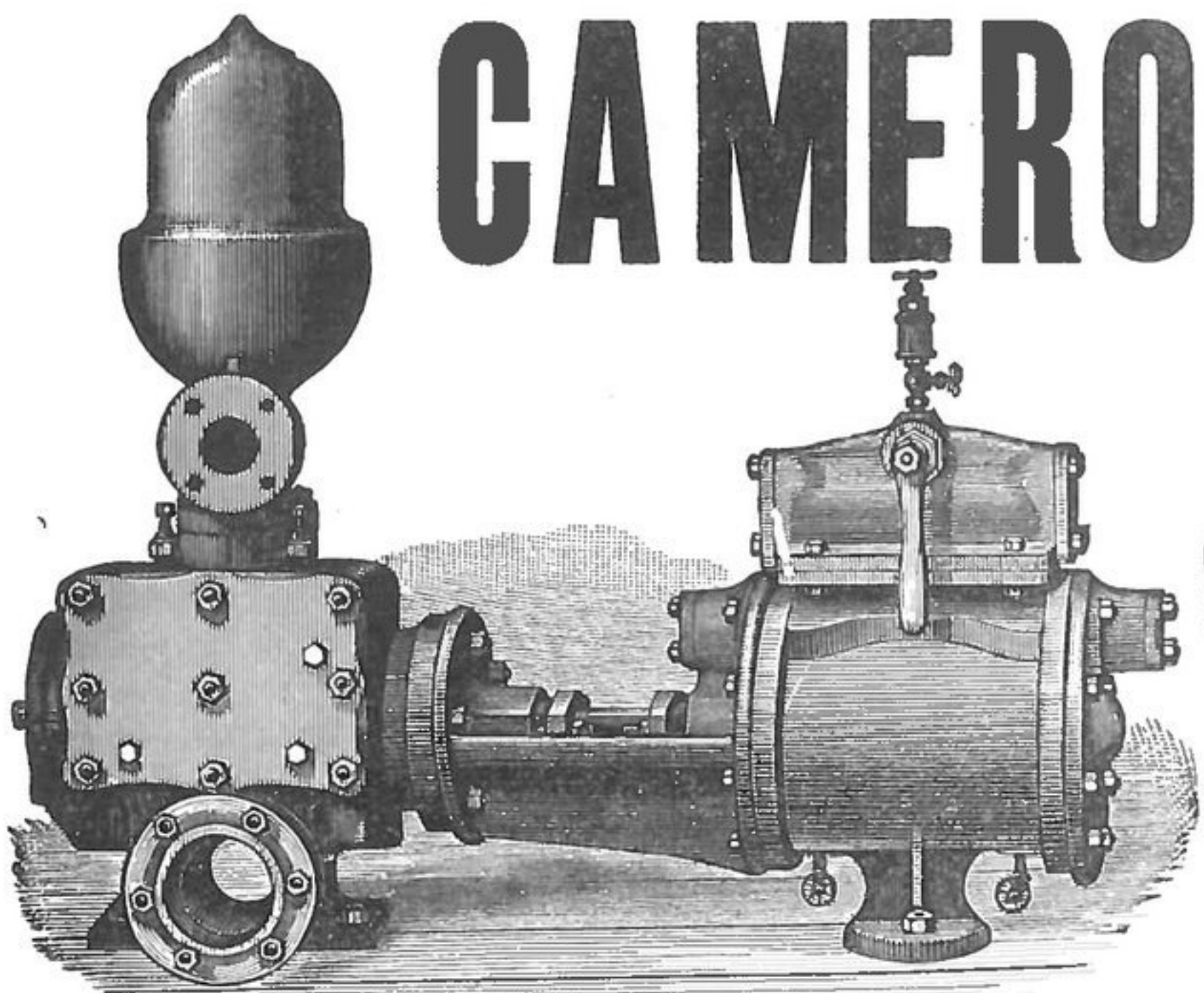
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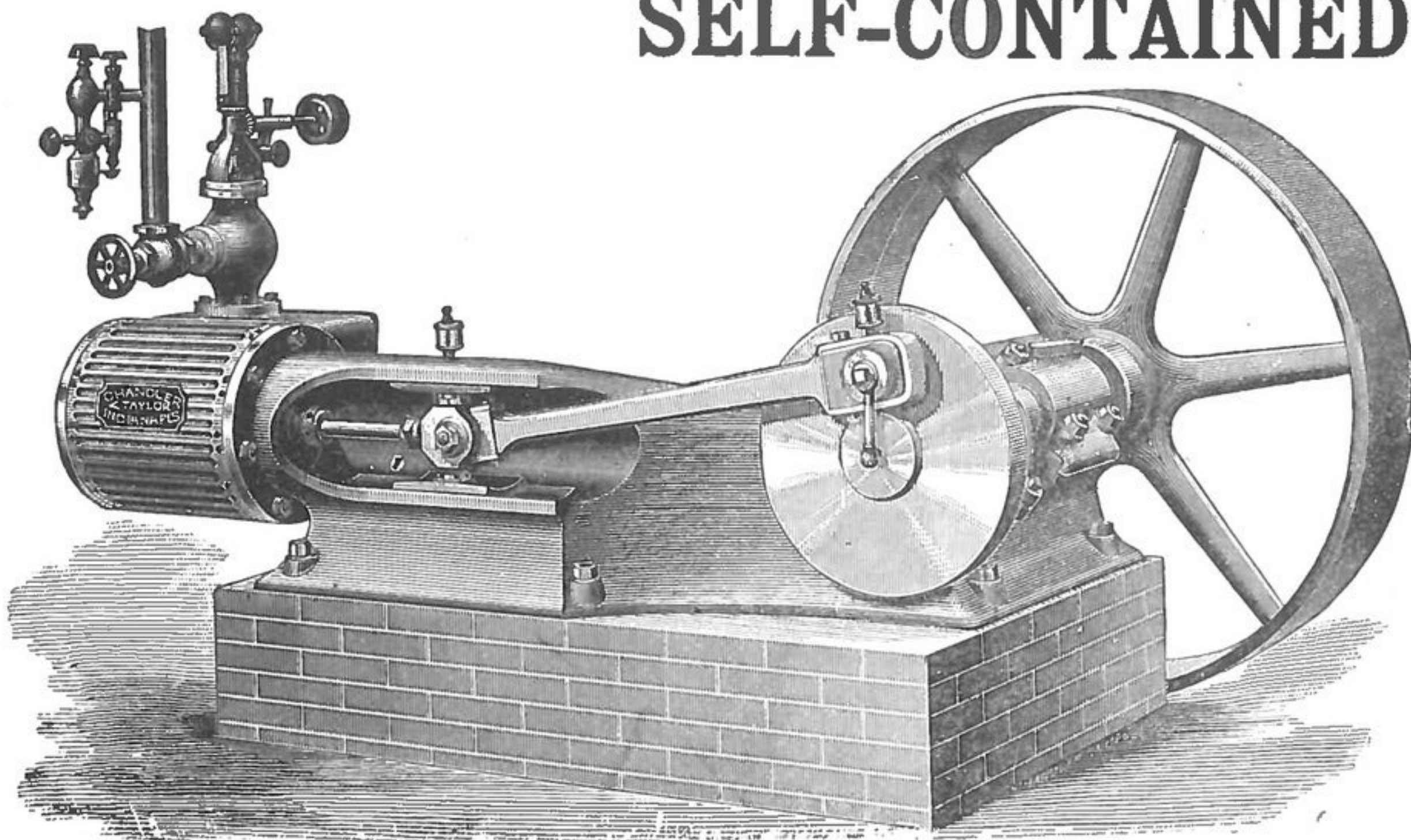
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NOTES & NEWS

J. Peters' grist-mill, Clopton, Ala., burned.
 M. M. Staples, miller, Cornish, Me., is insolvent.
 C. C. Truss, Trussville, Ala., improved his grist-mill.
 D. M. Gilliland & Son, Hill, Ala., will start a corn-mill.
 Mr. Frederick, Keyser, W. Va., improved his flour-mill.
 Garth, Nash & Co.'s mill, Houston, Tex., burned; loss \$4,000.
 The Olive Milling & Land Improvement Co., Olive, Cal., burned out.
 W. L. Rice, Mouse Creek, Tenn., is repairing and improving his flouring-mill.

J. Keith, Cookville, Tex., has put a new outfit of machinery in his grist-mill.

D. H. Alverson's grist-mill, Villa Nova, near Warrenton, Miss., wrecked by explosion.

Gallinas, Tex., men have incorporated the Gallinas Mill & Gin Co., to operate a grist-mill.

The Russell & Miller Milling Co., Bismarck, Dakota, is succeeded by the Mandan Roller Mill Co.

Jas. W. Waters, New Berne, N. C., wants machinery for a grist-mill, which he will build at once.

Messrs. Egloff, Granbury, Tex., will build a 150-barrel flour-mill and a 250,000-bushel grain-elevator.

Says Chicago *Daily Business*: Joe McDonald thinks the crop of wheat this year will turn out to be nearer 580,000,000 than 480,000,000 bushels.

Millard F. Wright, Havre de Grace, Md., is organizing a stock company to operate the Swansburg flouring-mill, which is being remodeled to rolls.

A boiler in the Galaxy Mills, Minneapolis, Minn., exploded on the 6th of October. Assistant-engineer Frank Banks and his helper, Joseph Evans, were killed.

The rye crop of France is estimated at 71,222,000 bushels, which is about 9,000,000 bushels in excess of last year, and more than the average of late years.

Stephen D. Parrish, Richmond, Ky., proposes to build a mill to turn out 25 barrels of flour and 250 bushels of meal daily, at Pineville, Ky. He wants machinery and a 40-horse-power engine.

A Mississippi man, who was not rushed with business, counted the seeds in a bushel of different kinds of grains and found that there were 832,000 grains in a bushel of wheat and 72,130 in a bushel of corn.

W. S. Cook and others, Fayetteville, N. C., have incorporated the Carolina Roller Mills & Supply Co., capital \$25,000, to buy and operate the Carolina Flour Mills; they will enlarge; machinery is wanted.

Says the Cincinnati *Price Current*: Canadian official calculations in regard to the wheat crop have taken quite a shift this season, illustrating the capricious nature of that climate with reference to influence upon agricultural productions, and possibly a defective system of formulating estimates in regard to condition of the crops.

The "Bread Union, Limited," has been incorporated in London, with a capital of £500,000, in 100,000 shares, of £5 each. The Union takes in 277 old established bakery concerns and three steam flour-mills and expects to secure good dividends for the share-holders as a result of the amalgamation and working under one general management.

T. L. Norman, of West Point, Georgia, has just patented a flour barrel made of cotton duck. The barrel is twelve or fifteen pounds lighter than a wooden one and 10 or 15 per cent. cheaper. When empty the barrel can be pressed into a small space and shipped to the mill to be re-filled. It is water-proof and stands the weather better than the old-fashioned barrel. The tests so far made of it have been highly satisfactory, it is said.

The first direct shipment of Duluth wheat to the British mills ever made on the merits of the grain as shown by sample left Duluth recently

on the steamer Oceanica. It was purchased by John Hardman & Sons, of Edinburg, Scotland. The identity of the grain is preserved in transit.

The Scandinavian Elevator Company of Minneapolis, Minn., which has been for some time under the management of the Dakota Alliance, was recently re-organized, its name changed, and the company made purely an alliance co-operative association. The name was changed to "The Alliance Elevator Company."

Says the Minneapolis *Market Record*: The condition of winter wheat has been unsatisfactory in nearly all sections raising it since grinding on the new crop began. About the time of cutting it was generally called fine in quality and plump. It is true that the dampness at harvest and stacking time did much injury and reduced permanently the quality of much of it, but wet weather at harvest time does not shrivel the grain as some of it is found to be. Even in Kansas, where the yield was large, the wheat on going to market is grading Nos. 4 and 3 to a large extent, making it troublesome to sell very much of the crop at satisfactory figures.

Says Chicago *Daily Business* of October 9: No change in the situation up north can be detected. The movement is still heavy, and the wheat keeps coming forward as fast as the railroads can carry it. Chicago mixers and cleaners are getting their share of it, and the inspection sheet this morning showed 36 cars out of 198 of all kinds received as from "special houses." The wheat that is coming in is grading poorly, but some improvements over the quality of receipts up to a few days ago is noted. Toledo reports that a decided improvement is shown in receipts there. The winter wheat movement everywhere is light, however, and there are well defined indications that the amount left in farmers' hands is not up to popular expectations. A gentleman from Sangamon county, this State, who was on 'Change this morning, says that the farmers in that county hadn't enough unsold to feed them. This is one of the fertile and rich counties of the State. Higher prices may bring out car loads, however, where bushels were not supposed to exist.

Says the Winnipeg, Manitoba, *Commercial* of October 7: The wheat crop of Manitoba this year is continually growing, at least in the minds of a good many, judging from the items appearing from time to time in eastern papers. Nothing less than a surplus of 12,000,000 bushels will now suit, and this is the estimate of the surplus wheat crop of Manitoba most generally accepted in eastern Canada, so far as can be learned from observing articles appearing in eastern papers. Now, it may just as well be understood, first as last, that Manitoba will not have any such quantity of wheat this year for export. Nobody here at all informed as to the situation looks for 12,000,000 nor for 10,000,000 bushels of surplus wheat this year. Estimates by local grain men run from 4,000,000 to 6,000,000 bushels for export, and the happy medium between these extremes is probably a pretty liberal allowance, when we consider that the tendency in the past has invariably been to over-estimate the crop. Government returns in August pointed to a total yield of from 8,000,000 to 9,000,000 bushels, but these figures are considered by the best authorities to be very considerably above the mark.

BOOKS AND PAMPHLETS.

The contents of the present number of GOOD HOUSEKEEPING, as details on its Bill of Fare, show it to be an interesting and valuable number. Among the attractions are: "Helps for Young Housekeepers," (continued,) by Catherine Owen; "Housekeeping in Foreign Lands," (South America,) by F. M. Stoddard; "The Family Skeleton," by Mattie W. Baker; "Bread and People," by Pauline Adelaide Hardy; "Books," by Hester M. Poole; "Practical Window Gardening," by M. J. Plumstead; "The Children of the Household," by A. D. Fogg; "Bits of Canadian Country Home Life," by Mary M. Todd; "Some Domestic Don'ts," by Ruth Hall; "Bits of Saving," by L. Eugenie Eldridge; "Cod-Fish and its Many Virtues," by Annie Curd; "Sallie's Green Trunk," by Nelly Browne, and of Poetry: "Over and Over Again," by Ada Simpson Sherman; "My Old-Fashioned Girl," by F. H. Curtiss; "Aunt Nancy's Romance," by Hattie Whitney; "The Model Housewife," by Lady Mollie; "Work and Song," by Margaret Gilman George; "Little Pull-My-Whiskers," by W. T. Talbott; "Purple Aster," by May Riley Smith; A Page of Fugitive Verse, etc., etc.



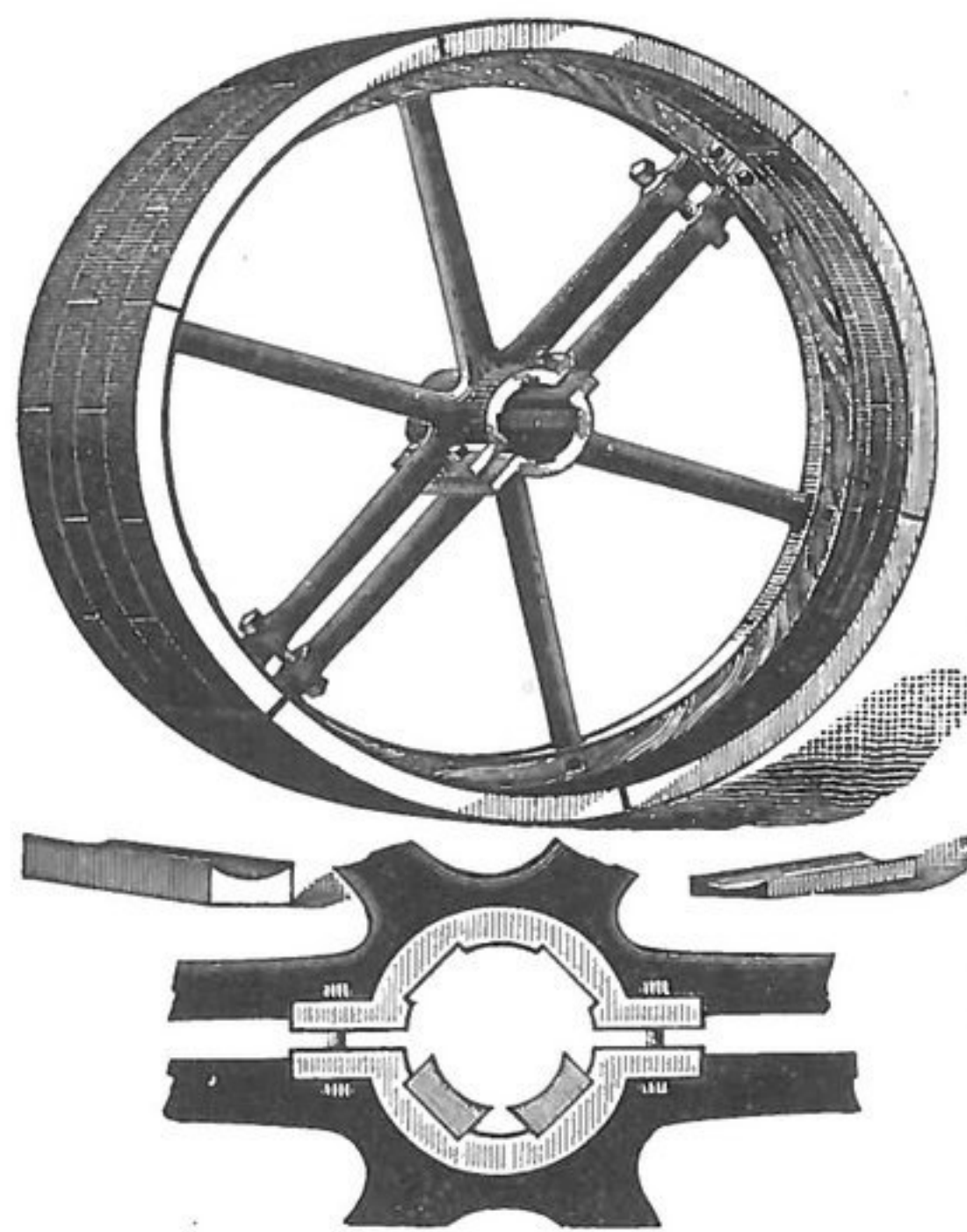
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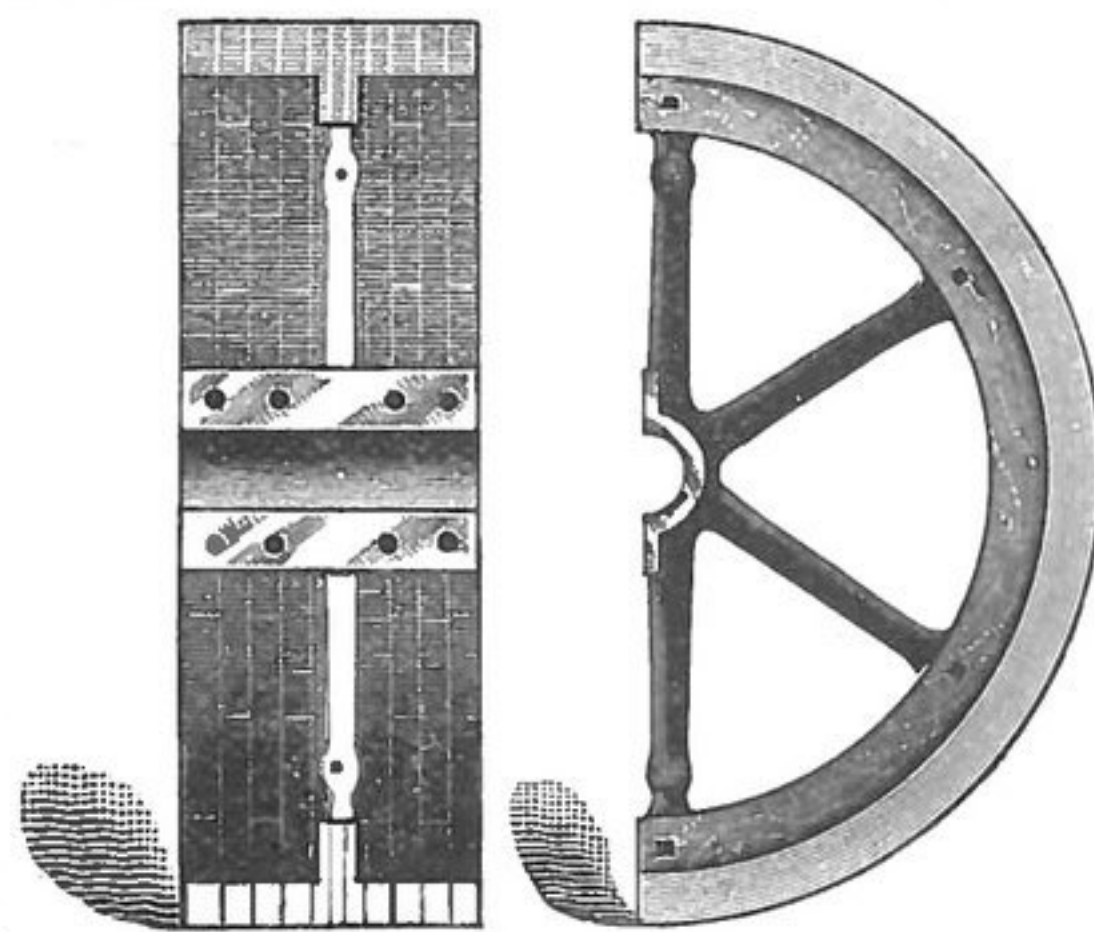
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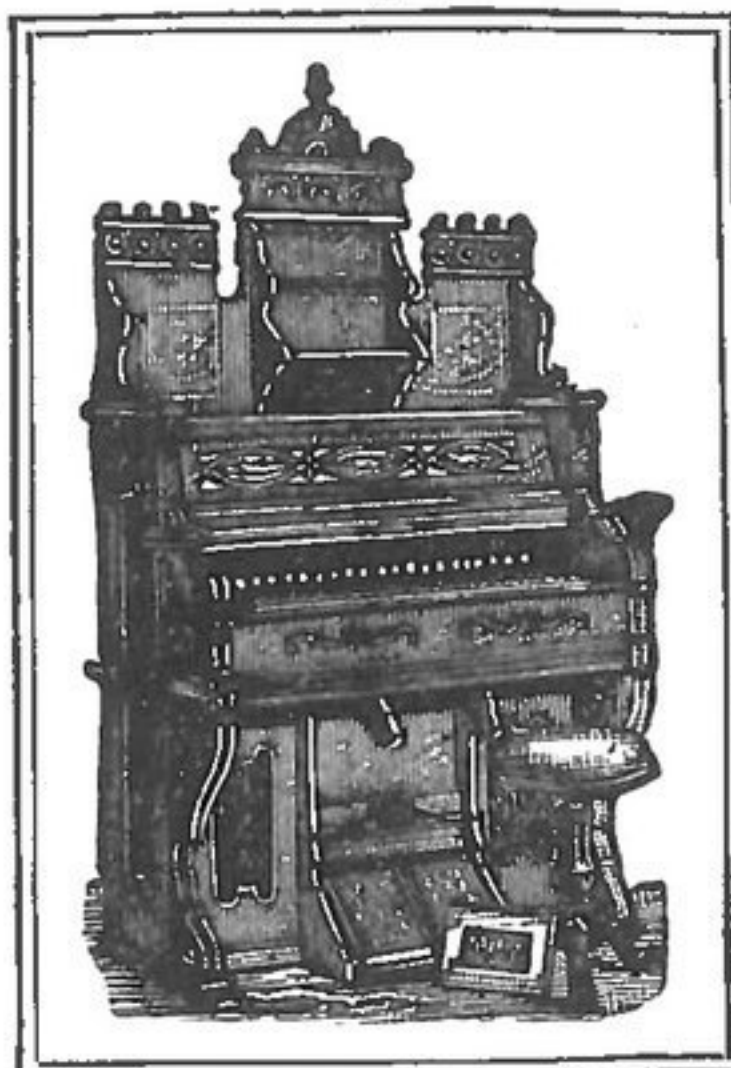
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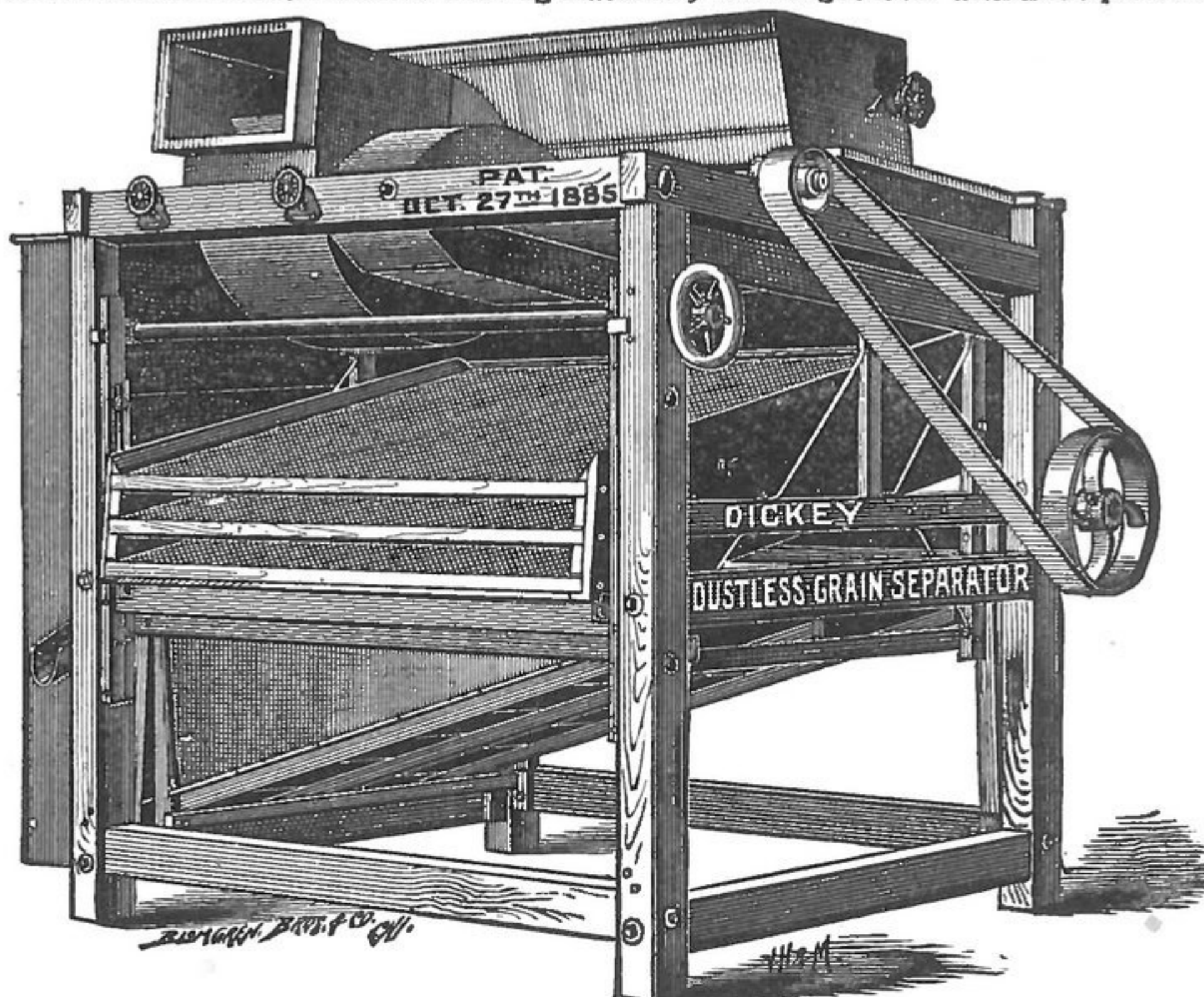
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This Separator is our latest and most perfect, and guaranteed to be the superior of any now on the market. This machine, as can be seen by the cut, is not a warehouse fanning mill with one patent attachment, but is a Dustless Separator, made for the express purpose of thoroughly cleaning and separating all kinds of grain in large quantities; its construction is such that the working machinery and weight is all within the parts or anchors.



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We claim for it Superiority over everything of the kind made, in simpleness, durability, saving of power, capacity and cost of construction. Its height will accommodate any number of spouts from different points, without moving machine. They have a capacity from 700 to 1,500 bushels per hour. We also control exclusively the manufacture of the celebrated Dickey Giant, End and Side Shake, Warehouse Mills, that have attained such a world-wide reputation. Sent on approval to any reliable party. For full particulars address,

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EUROPEAN ECHOES.

THE wheat of the new Bulgarian crop is said to be very high in quality.

A WHEAT plant was cut at Habas, in the extreme south-west of France, which showed 47 offshoots and carried 1,551 kernels. The straw measured about 5 feet and 3 inches in height.

A NOVEL dust-collector has just been patented by a milling engineer in London. The dust is collected by electricity generated by vulcanite rods, and the machine is said to act very well, especially on purifiers.

H. BLACK, of Rothsay, Buteshire, Scotland, has obtained a patent for manufacturing an improved quality of bread, in which a quantity of flour is mixed with warm water, barm or compressed yeast, lime-water and salt, and kneaded into dough, which is allowed to remain untouched for some time and is then again worked or kneaded and placed in warm water, to which lime-water is added and left there to ferment, after which it is washed with water and then added to the usual sponge, or used by itself for the manufacture of biscuits, infants' rusks, or like fancy bread.

B. D. MARTIN, of Oakengates, Salop, England, has obtained a patent in the United Kingdom for improvements in casting chilled rolls. The rolls are chilled from the interior. The center is first formed either by casting or forging in iron or steel and is grooved longitudinally. It is slightly heated and placed in a greensand mold, and the part to be chilled is cast round it. In casting a roll a part is first cast and is left in the mold; the part of the mold is removed and a new part for the chilled portion of the roll is substituted. This arrangement renders the re-heating of the center unnecessary.

CONCERNING the English wheat crop "Bell's Messenger" says: Wheat threshings have been favored by dry weather and latterly by the prevailing northerly breeze. The results of the harvest as disclosed by the thresher and the flail are exceedingly diverse. In many parts the yield is nearly double the wretched out-turn of last year, while in others it is weight and quality alone which save this season's record from being worse than last year. It must be remembered that backward districts in 1888 were vastly improved in their wheat yield by the unclouded magnificence of the September weather, while in the present season many parts of the midlands, the fens and of Lincolnshire, sustained irreparable damage from flooding thunder-storms.

ACCOUNTS from Adrianople report favorably on the harvest in that part of the Ottoman empire. It was expected that the wheat crop would have given a yield of 30 to 40 per cent. over that of last year. More exact estimates made since threshing operations have been well begun show that the weight of the crop will not exceed that of 1888 (a very poor one) by more than 20 per cent. The quality of the wheat is excellent. The accounts of the barley, corn and rye crops in the Adrianople district, as well as those of the smaller seeds and grains, are on the whole quite satisfactory. It appears that the sanguine estimates of the crops entertained earlier in the season led to high bids from farmers of the revenue, from which the Turkish treasury will profit substantially.

A GERMAN milling paper recommends a very simple means of getting rid of rats in mills and warehouses. By pouring liquid tar into all the holes that can be detected, the rats will either be suffocated, or, being besmeared with tar, will come forth and perish in a short time. It is best to let them run off when coming out, because in running into another hole they will besmear and thus force away their companions, too. In localities which one wishes particularly to protect

from the vermin, old boards besmeared with fresh tar may be placed; the rats will never cross them. As soon as the tar is drying up and losing its odor it must be renewed. This being done for several successive days, those of the troublesome vermin which have not been killed by the medicine will speedily remove to other quarters.

SAYS the London, England, "Mark Lane Express:" What, in the present case, does the American government mean by the word "average"? The present crop which, taken altogether, is about 10 per cent. under the government average, is 40,000,000 bushels larger than the mean of the wheat crops of the last seven years. If it be imagined that the average is taken for a longer period, we search in vain for any data that meet the case. If we go back any great number of years the total production, America being a new country, becomes quite small. We abandon the problem, so far as a logical settlement of it goes, in despair, but as we have the privilege of belonging to an illogical people who are perfectly content with anachronism and incongruities, so long as they work well in practice, we will inform our readers that if to the American government figures they add 20, they can regard the product as an ordinary English average. Thus, when the American government say their winter wheat promises a yield of 60, if we add 20 we shall get 80, and we shall find the actual yield in most cases about 80 per cent. of a crop. In the present year, when the winter wheat was put at 92 and the spring at 84, our rough rule would give us a winter wheat crop of 12 per cent. over average and a spring wheat crop 4 per cent. over average, figures which a comparison of the present year's yield with that of recent years will be seen to justify.

SAYS the London "Miller" of September 23: Without special reason for improvement the markets have improved for wheat in the past week. There has been more inclination on the part of millers and others to buy, apparently because present rates are admittedly tempting. At the same time the quality of American flour offered at 23s. per sack is such that London and other millers are bound to proceed cautiously in their purchases. Already complaints multiply of the inferiority of new wheat to expectation. Farmers have less to deliver than they thought and find the measured bushel weighs less than it should in good years. In some cases to make up the quarter of 504 pounds $8\frac{1}{2}$ bushels have to be measured. In fewer cases the natural weight has been good, 64 pounds to the measured bushel. All samples offered are suspiciously scanned for weight, quality and absence of rough, weathered skin. Belgium and Holland have become steady in the markets, imports of ordinary bulk being required. France is offering its home crop below the rates required for import wheat. An import of probably 3,000,000 quarters of wheat is now thought necessary, for it is remembered Marseilles is but often a mid-channel for the supply of Russian wheat to Switzerland. Germany and Central Europe had markets a trifle dearer at the end of last week. India is now exporting moderately, but asks more money for No. 1 Bombay and White Delhi. Russia is sticking to its wheat with confidence; its yield is now allowed to be considerably deficient, if not so bad as at one time announced. The failure of the Russian grass crop should keep cheap feeding wheat and rye in demand at home. All exporting countries in the past three months have sent us but about 6,750,000 quarters, against 7,750,000 quarters received in the same period last season.

MILLING PATENTS.

Among the patents granted October 1, 1889, are the following:

Anton Filip, Cedar Rapids, Ia., No. 411,799, a grain elevator and cleaner.

Mortimer C. Cogswell, Brooklyn, N. Y., No. 412,019, a grinding-mill.

John S. Duffy, B. T. Duffy, Wm. O. Duffy and Chas. C. Duffy, Moorefield, Neb., No. 412,076, a rotary grain-meter.

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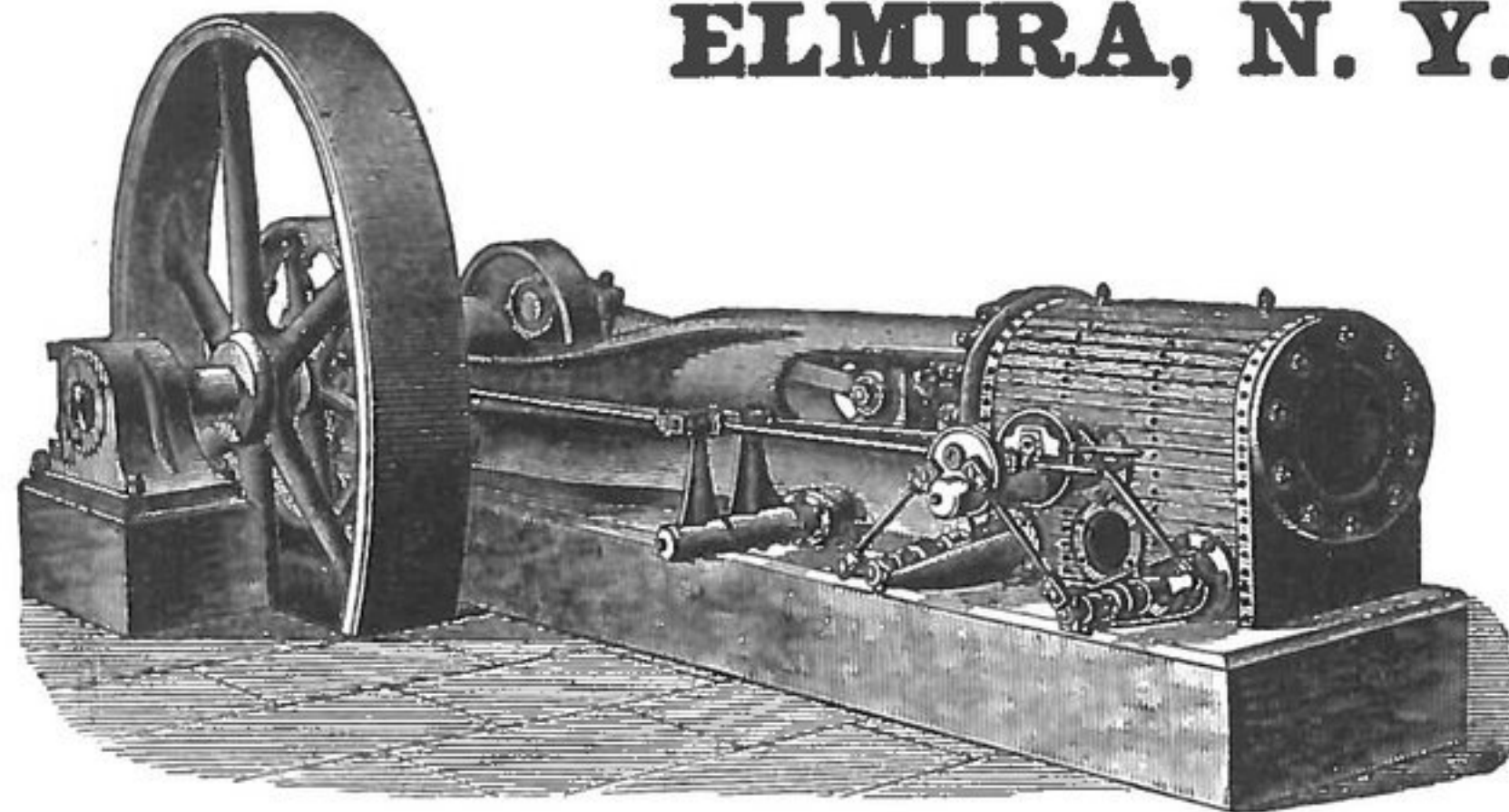
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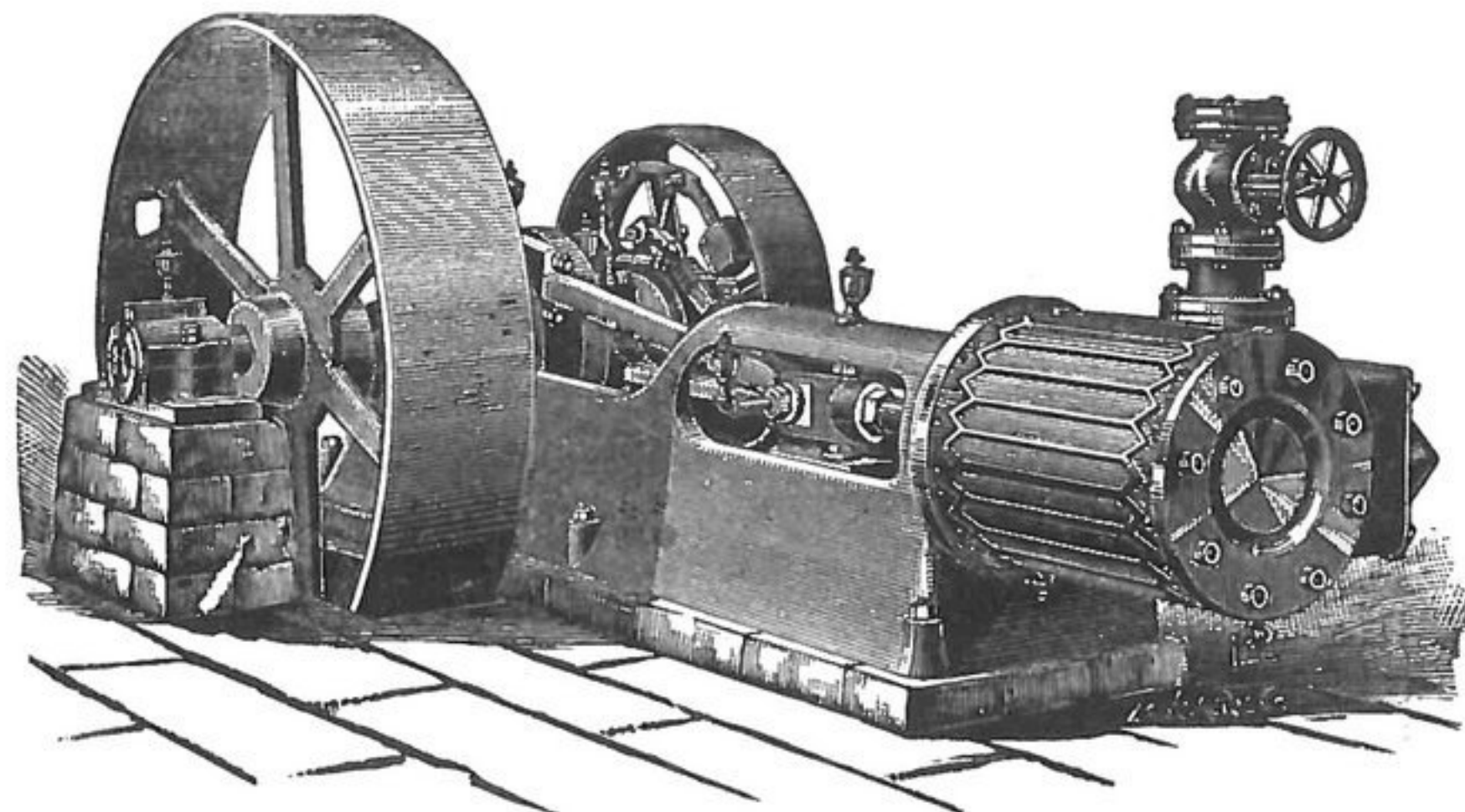
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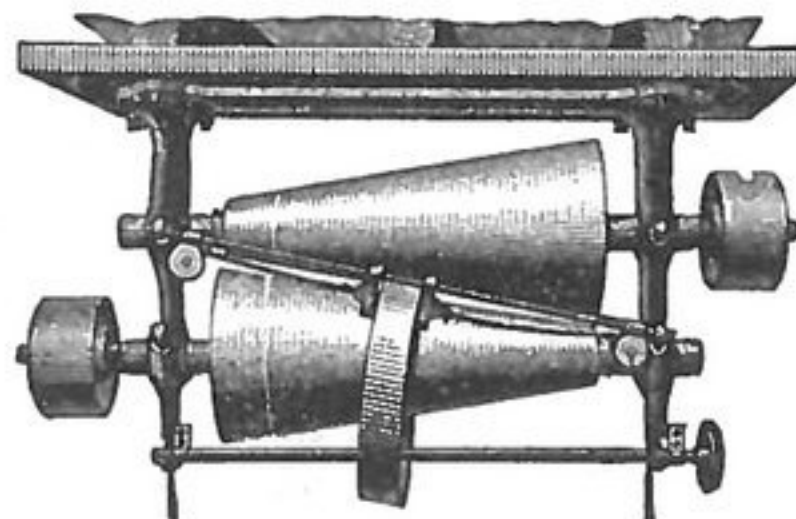
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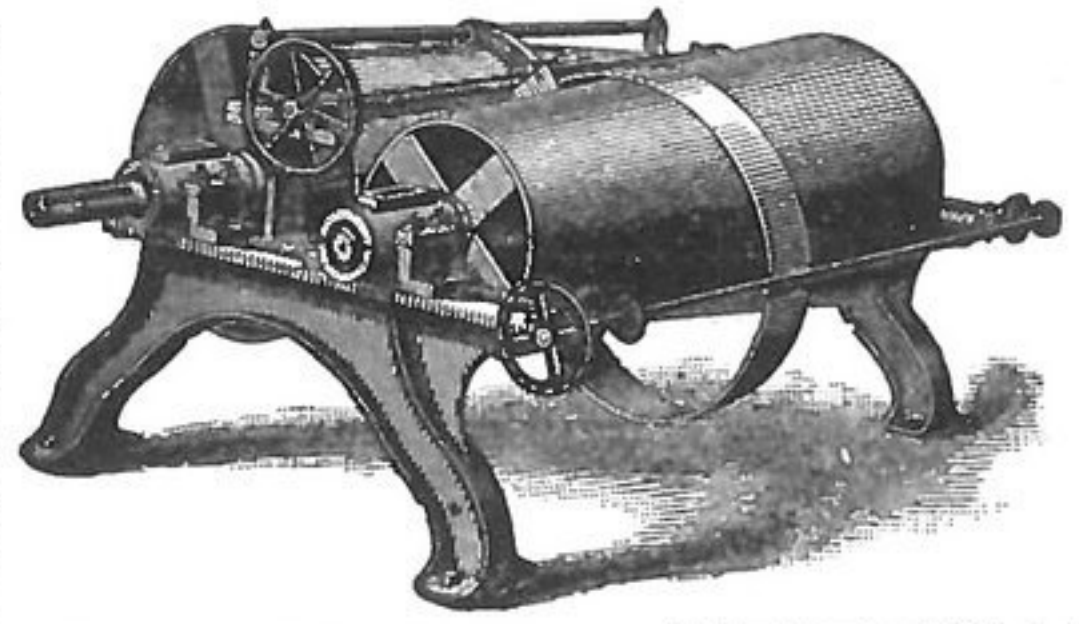
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OFFICE OF THE MILLING WORLD,
BUFFALO, N. Y., Oct. 12, 1889.

Friday of last week was a day of dull and easier markets on corn and wheat. October wheat closed at 85½c. Options 1,500,000 bushels. October corn closed at 39¼c. Trade was light. October oats closed at 26¼c., with light business. Wheat flour was dull and in buyers' favor on springs, but firm and in sellers' favor on winters, which are becoming scarce, especially the low-grades in sacks and the high-grade patents. The other lines were featureless.

Saturday was a dull, slow, featureless day, with wheat and wheat flour slightly stronger. In New York wheat was stronger in sympathy with the Chicago markets, where the crowd of shorts were freely buying. October wheat in New York closed at 85½c. Options only 750,000 bushels. October corn closed at 39¼c. and oats at 26¼c. Both were in light trading. Wheat flour was quiet and unchanged in price, and firmer in tone. Trade was light. The minor lines showed no marked features.

Monday brought featureless and inactive markets on the whole list, with every line easier excepting wheat. October wheat in New York closed at 86c. Options 2,100,000 bushels. The small increase in the visible supply aided in firming up wheat. October corn closed at 39¼c. and oats at 26¼c., and both were in very light trading. Wheat flour was dull and unchanged. Exporters did little. The minor lines were all quiet. The visible supply in the United States and Canada was as follows:

	1889. Oct. 5.	1888. Oct. 6.	1887. Oct. 8.
Wheat.....	18,849,813	31,533,385	30,980,852
Corn.....	11,511,974	10,080,353	7,385,756
Oats.....	5,645,516	7,408,924	5,321,000
Rye.....	1,183,019	923,394	342,443
Barley.....	445,907	407,620	1,649,456

Tuesday brought generally duller and lower markets, flour being the one exception. October wheat closed at 85½c. in New York. Options 1,700,000 bushels. October corn closed at 39¼c. and oats at 25¾c. Wheat flour was steady on trade brands and quiet. Exporters took some good lots. The other lines were featureless.

The following shows the amount of wheat and flour, together with the amount of corn on passage to the United Kingdom for ports of call or direct ports for the weeks mentioned:

	1889. Oct. 8.	1888. Oct. 9.
Wheat and flour, qrs....	1,449,000	2,253,000
Corn, qrs.....	408,000	276,000

The following shows the amount of wheat and corn on passage to the Continent for the past week and for the same week last year:

	1889. Oct. 8.	1888. Oct. 9.
Wheat, qrs.....	347,000	707,000
Corn, qrs.....	141,000	57,000

	Qrs.
Shipments India wheat to U. K.....	25,000
do do Continent..	22,500

The imports into the United Kingdom for the past week and for the same weeks in previous years were as follows:

	1889. Oct. 8.	1888. Oct. 9.	1887. Oct. 11.
Wheat, qrs.....	127,000	385,000	167,000
Corn, qrs.....	109,000	86,000	89,000
Flour, bbls.....	150,000	176,000	232,000

Wednesday brought active, lower opening and steadier closing markets. Export demand for wheat grain and flour was very lively. London cables on wheat were higher, and Liverpool cables were lower. Private cables were generally stronger. The steamer "Unionist" took 105,000 bushels of wheat in New York for South America. Trade was scattering during

the day. October wheat closed at 86½c. Options 2,300,000 bushels. Atlantic port exports 78,648 bushels. October corn closed at 38¾c. Options 1,500,000 bushels. Atlantic port exports 120,000 bushels. October oats closed at 25¾c. Options 375,000 bushels. Atlantic port exports 12,000 bushels. Buckwheat grain was 52c. at elevator for old, with 60c. spot asked for new, and with new selling at 54c. to arrive in New York within a month. Rye grain was quiet at the following quotations: Spot No. 1 Western afloat in New York at 50@51c; State 56@57c., and Jersey and Pennsylvania in car lots on track 45@55c. as to quality. Barley was purely nominal. No prices were quoted. Malt was dull, unchanged and in buyers' favor at the following quotations: Two-rowed State 72@77c; six-rowed 75@80c; country-made Canada 75@85c; city do 90@95c. Mill feed was firmer in absence of western supplies, which could not be laid down at New York prices. The quotations were: 55@60c. for 40, 60 and 80 lbs; 72½@82½c. for 100 lbs and sharps; 65@70c. for rye.

Wheat flour was again active on all export grades, and the scarcity of some trade brands sent up prices 5@10c. beyond the limit and checked trade. The Atlantic port exports included 1,275 sacks and 2,812 barrels. Total sales in New York 43,000 barrels. The quotations were as follows:

SPRING FLOUR.		
	Sacks.	Barrels.
No grade.....	\$1.60@1.75	\$....@....
Fine.....	1.95@2.20	2.10@2.35
Superfine.....	2.20@2.45	2.45@2.80
Extra No. 2.....	2.45@2.75	2.70@3.00
Extra No. 1.....	3.15@3.35	3.40@3.90
Clear.....	3.25@3.50	3.55@3.65
Straight.....	3.90@4.25	4.30@4.85
Patent.....	4.75@4.95	4.95@5.35

WINTER FLOUR.		
	Sacks.	Barrels.
No grade.....	\$1.75@2.00	\$....@....
Fine.....	2.20@2.50	2.30@2.60
Superfine.....	2.55@2.75	2.55@2.80
Extra No. 2.....	2.60@2.90	2.70@3.00
Extra No. 1.....	3.00@4.00	3.15@3.95
Clear.....	3.55@3.90	3.85@4.15
Straight.....	4.15@4.25	4.20@4.50
Patent.....	4.40@4.60	4.60@5.00

CITY MILLS.		
W. I. grades.....		4.30@4.40
Low grades.....		2.60@2.65
Patents.....		5.00@5.60

Rye flour was quiet at \$2.90@3.15 for State superfine. Buckwheat flour was quiet at \$2.25-@2.40 for good to choice new, and flat at \$1.75-@2.00 for old. Corn products were quiet and easy in New York at the following quotations: Coarse meal 77@78c; fine yellow 88@90c; fine white 92@95c; Brandywine \$2.70; Sagamore \$2.70; Western and Southern \$2.65@2.70; grits \$2.60, and hominy \$2.50@2.60.

Thursday brought little change in the market conditions. In New York wheat was active. October closed at 86½c. Options 8,064,000 bushels, and spot sales 147,000 bushels. Receipts 263,450 bushels, and exports 53,000 bushels. October corn closed at 39¼c. Receipts 188,000 bushels, exports 178,556, spot sales 175,000, and options 1,520,000 bushels. October oats closed at 25¾c. Receipts 57,000, spot sales 156,000, and options 150,000 bushels. Wheat flour was again stronger generally. New York receipts were 23,863 packages, and the sales were 34,550 barrels. Prices included the following: Low extras \$2.65@3.00; city mills \$4.30@4.50; city mills patents \$4.90@6.00; winter wheat low grades \$2.60@3.00; fair to fancy \$3.10@4.65; patents \$4.22@5.25; Minnesota clear \$3.25@4.15; do straights \$3.85@5.00; do patents \$4.35@5.50; rye mixtures \$3.25@4.00; superfine \$2.10@2.80. The other lines were somewhat stronger.

The report of the Secretary of the Kansas State Board of Agriculture, issued October 10, shows that the crop of winter wheat is larger

by 1½ bushels an acre than estimated a month ago. The aggregate yield is now estimated at 35,060,048 bushels. On the other hand, the average yield per acre of spring wheat has been reduced 2½ bushels, the total crop being now estimated at only 1,189,803 bushels. The report says that it is yet too early to make a final estimate of the corn crop, but the yield is computed from the data at hand at 276,541,338 bushels.

BUFFALO MARKETS.

WHEAT—The wheat markets were firm and closed higher. Here there was a little call for hard spring, and offerings of spot were very light. Sales comprised 2 cars No. 1 hard at 90½c, and 3,600 bu No. 1 Northern at 86½c in store. At the close 91c was asked for hard, but ¼c less probably would have brought out a little, and Northern was held at 87c. Efforts were made to work c. i. f. stuff, but without success. At Chicago October opened at 80½c and closed at 81¼c, ¼c higher than the preceding close; December opened at 82½c, its bottom point, and closed at the highest mark, 85½c, also ¼c better; the last curb was 88¾c. At Duluth cash closed at 82½c, ¼c gain. At New York October closed at 86½c, ¼c higher; December closed at 88¾c, ½c advance. Winter wheat was dull and easy. Offerings were fair, and comprised a greater variety of grades than had been on the market for weeks, but buyers held off. The only sales were 4 cars No. 2 red at 88½c on track. No. 2 amber closed at 85½c asked, No. 2 red at 86½c, No. 1 red at 87½c, long-berry red at 89@90c, extra No. 3 red at 80@88c, No. 3 red at 79c, No. 1 white at 87½c, extra No. 2 white at 86c, No. 3 white at 81c, California white at 91. **CORN**—Corn was almost neglected. No. store stock was offered, and but little on track. The demand, however, was next to nothing. One car No. 2 yellow on track brought 88c, and 4 cars No. 2 to arrive sold at 88c in store. Lake receipts were expected to-day. No. 2 yellow in store closed at 87c, No. 2 at 86c, No. 3 at 85½c. **OATS**—Oats were dull but firm, values practically being unchanged. Sales included 7 cars No. 2 white at 26½@26¾c, 2 cars No. 3 white at 25@25¼c, 3 cars No. 2 at 24@24¼c. **BARLEY**—Was in light request and weak. Offerings were liberal, both of Canada and Western grades, but dealers reported that malsters generally were not inclined to buy excepting at considerably reduced figures. Sales were reported of 5,000 bu. good extra No. 3 Canada at 62c on track, 1 car sample Western (No. 3) at 47c, 5 cars sample Michigan to arrive at 66c. No. 1 Canada was quotable at 68@60c, No. 2 at 65@67c, extra No. 3 at 26@64c, No. 3 at 58@61c, No. 2 Western at 62@68c, extra No. 3 at 55@60c. No. 3 at 45@55c. **RYE**—One car No. 247c on track. **CANAL FREIGHTS**—Strong and unchanged. Wheat to New York, 5c; corn, 4¼c; oats, 3¾c. Corn to Albany, 4c; corn to Schenectady and Rotterdam, 3¾c; to Utica, 2¾c; wheat to Syracuse, 2¾c; corn, 2½c; wheat to Rochester, 2c. Lumber rates to New York, \$2.50; to Albany, \$2.00. **RAILROAD FREIGHTS**—To New York, Baltimore and Philadelphia rate points on grain, flour and feed 18c per 100 lbs; to Albany and West Troy, 10½c; to Boston 15½c.

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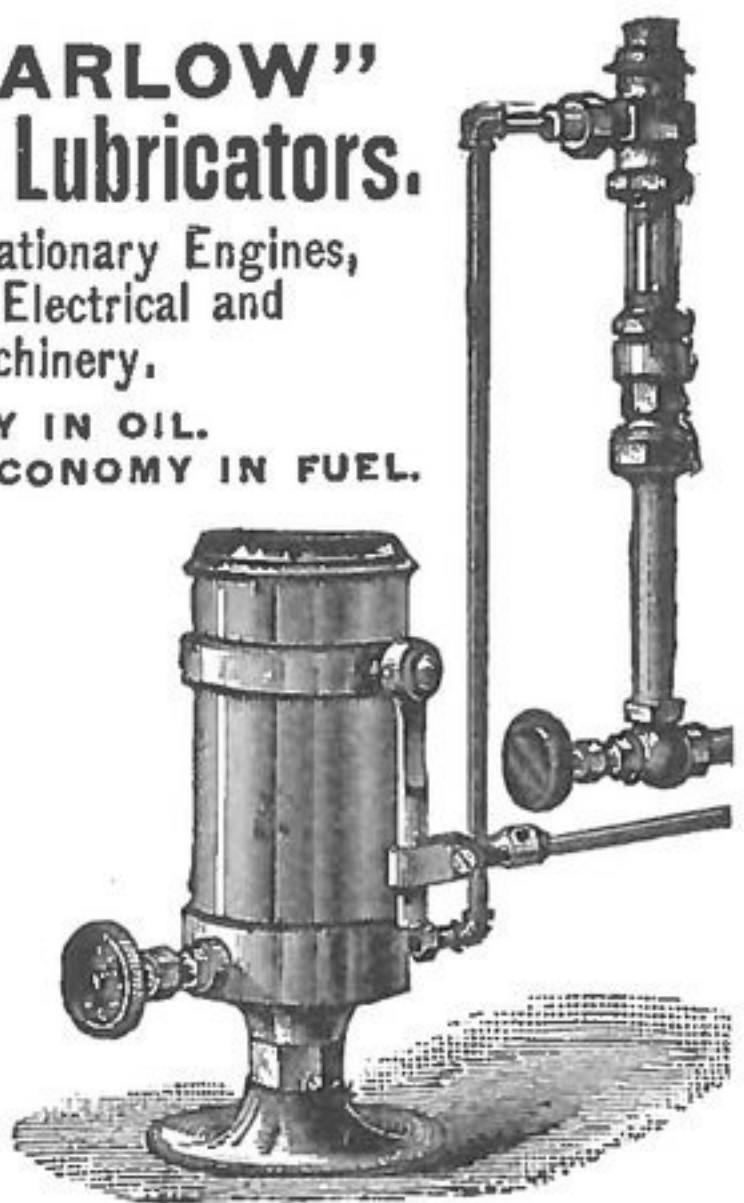
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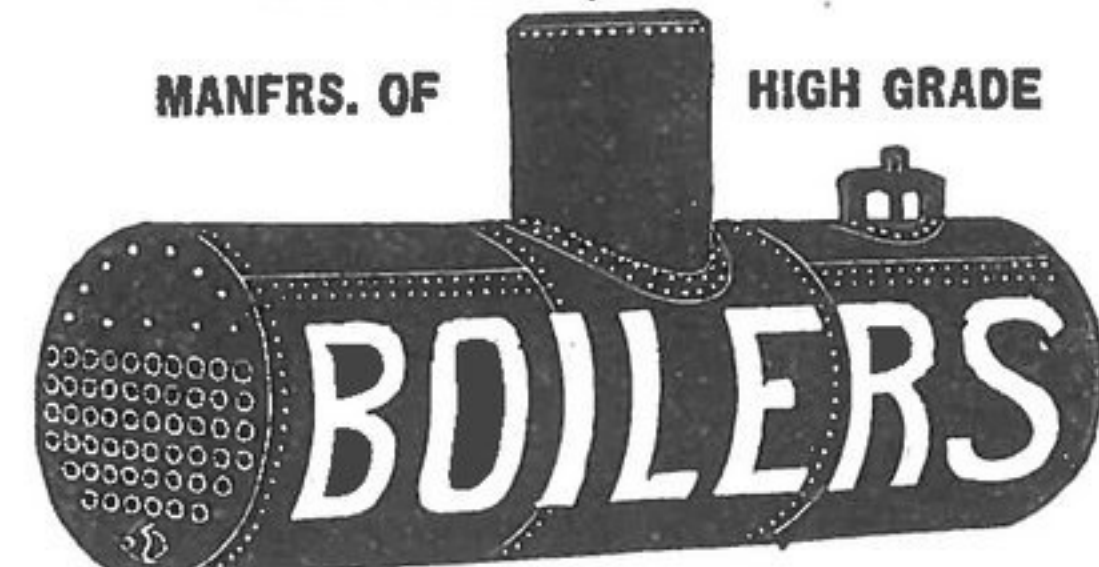
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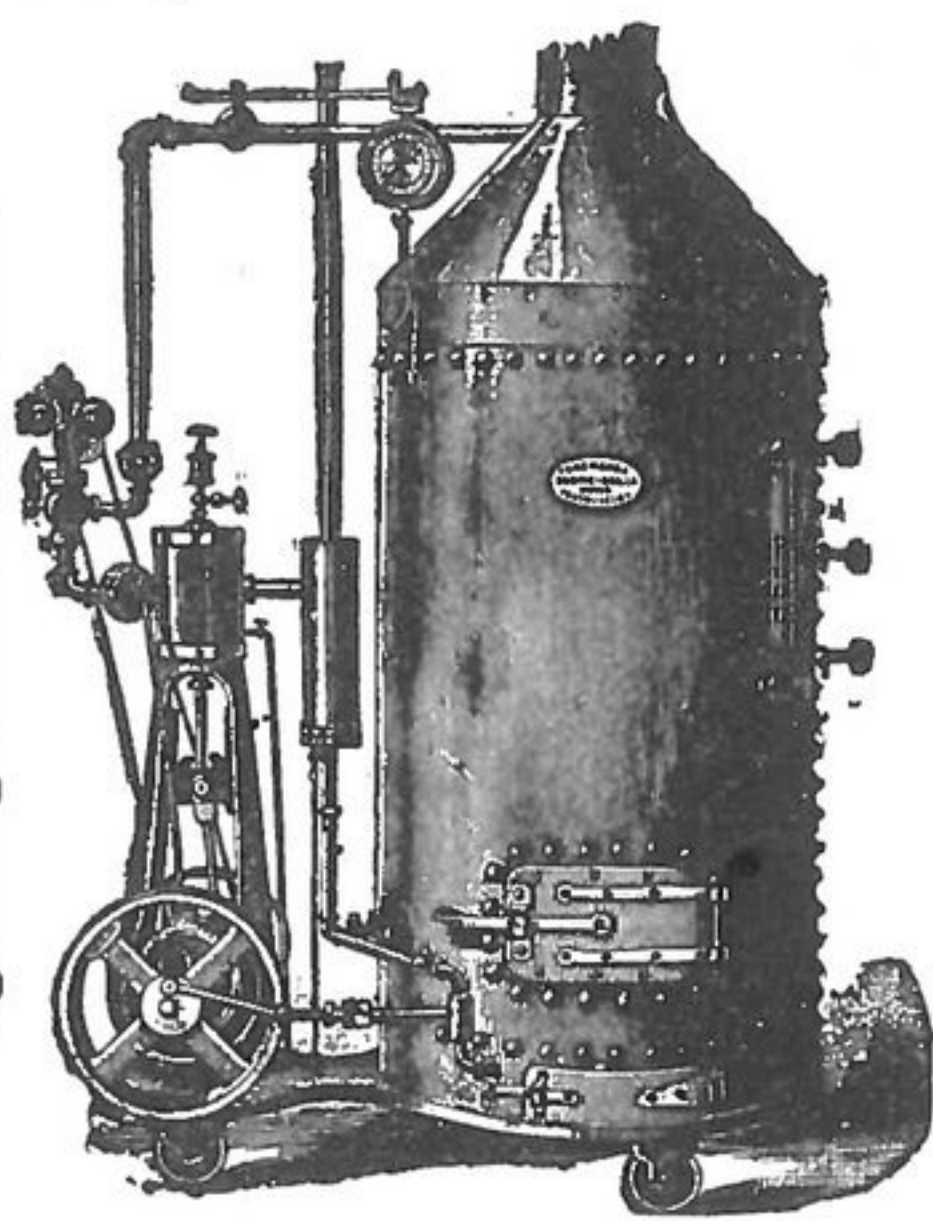
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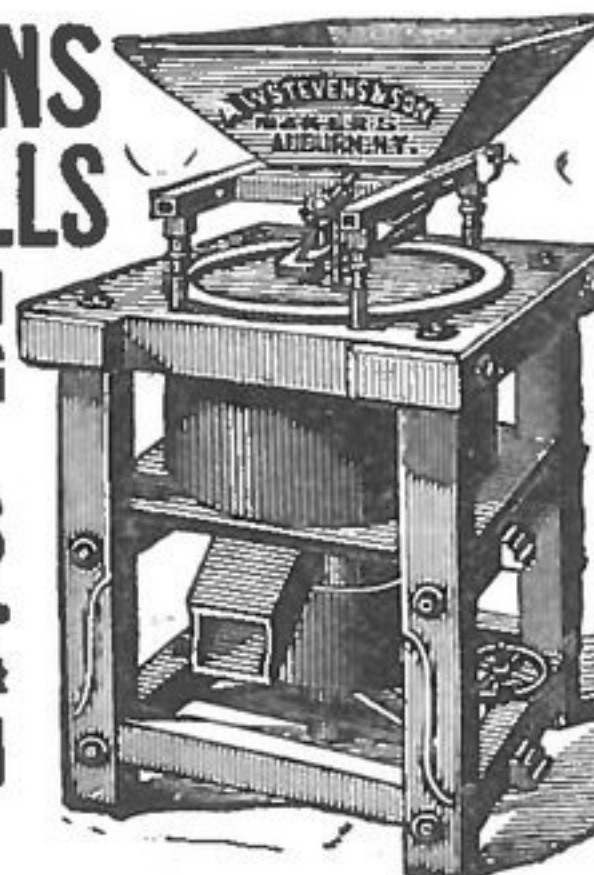
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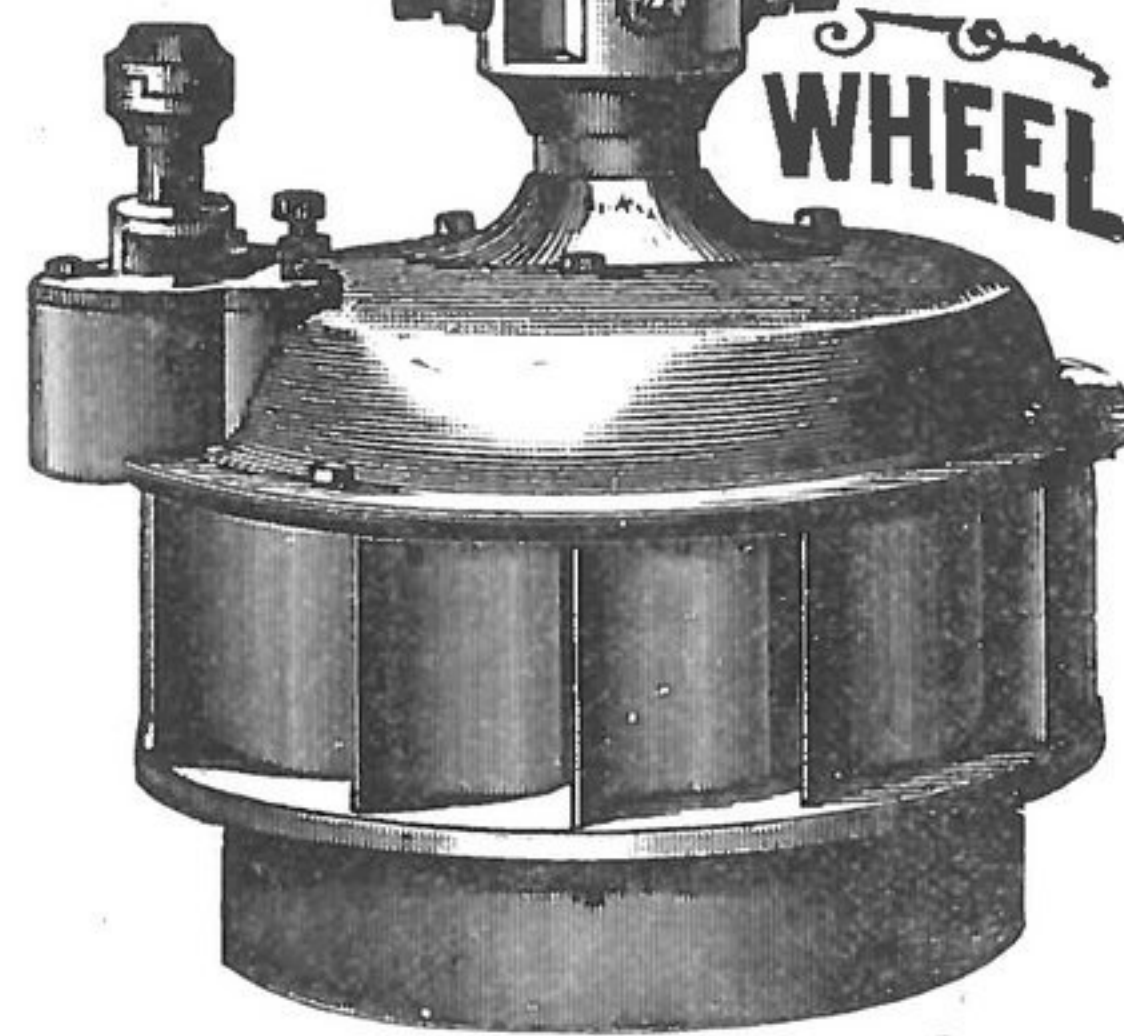
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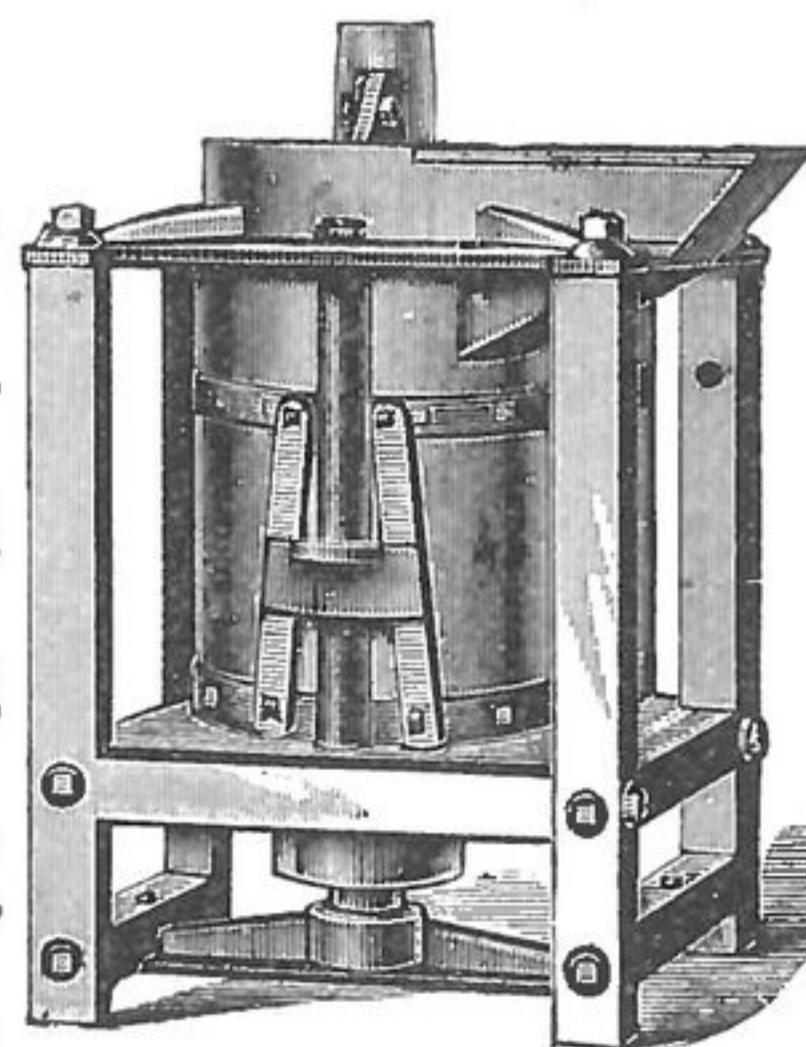
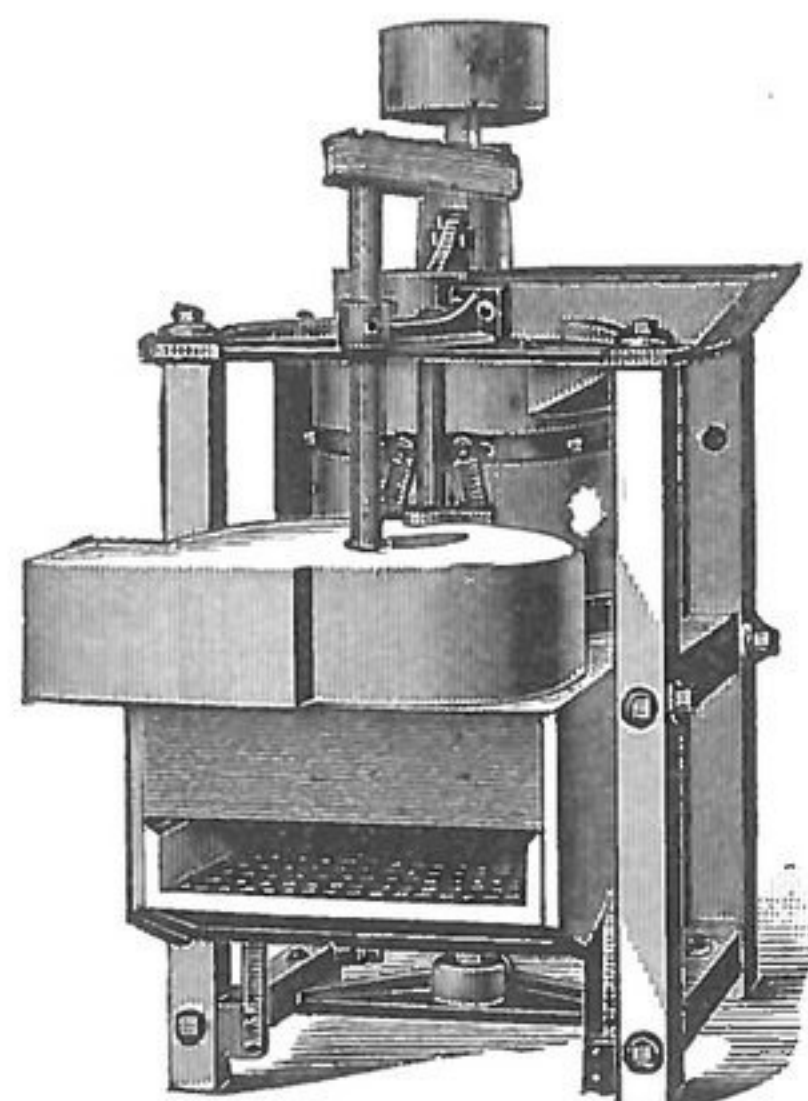
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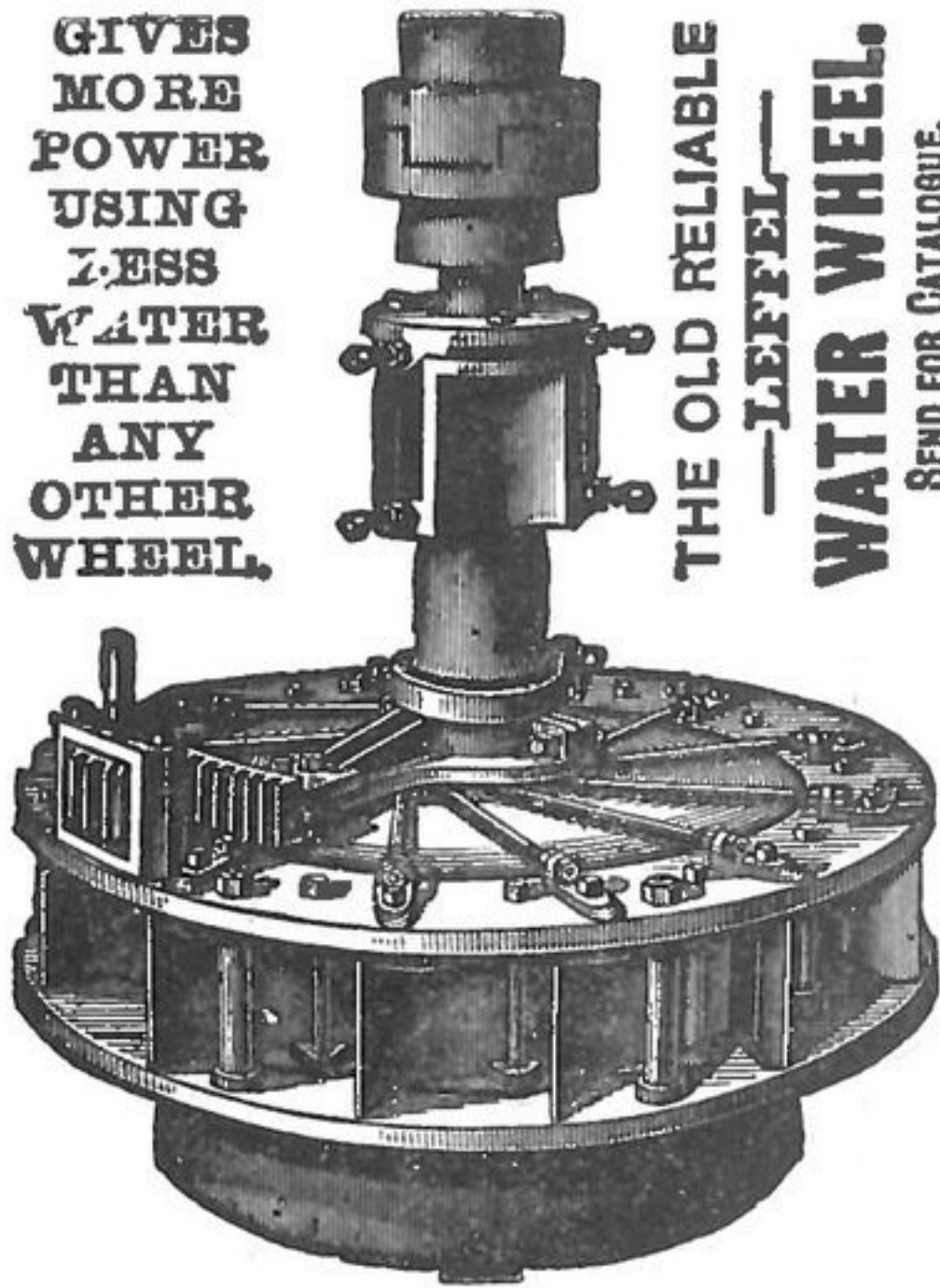
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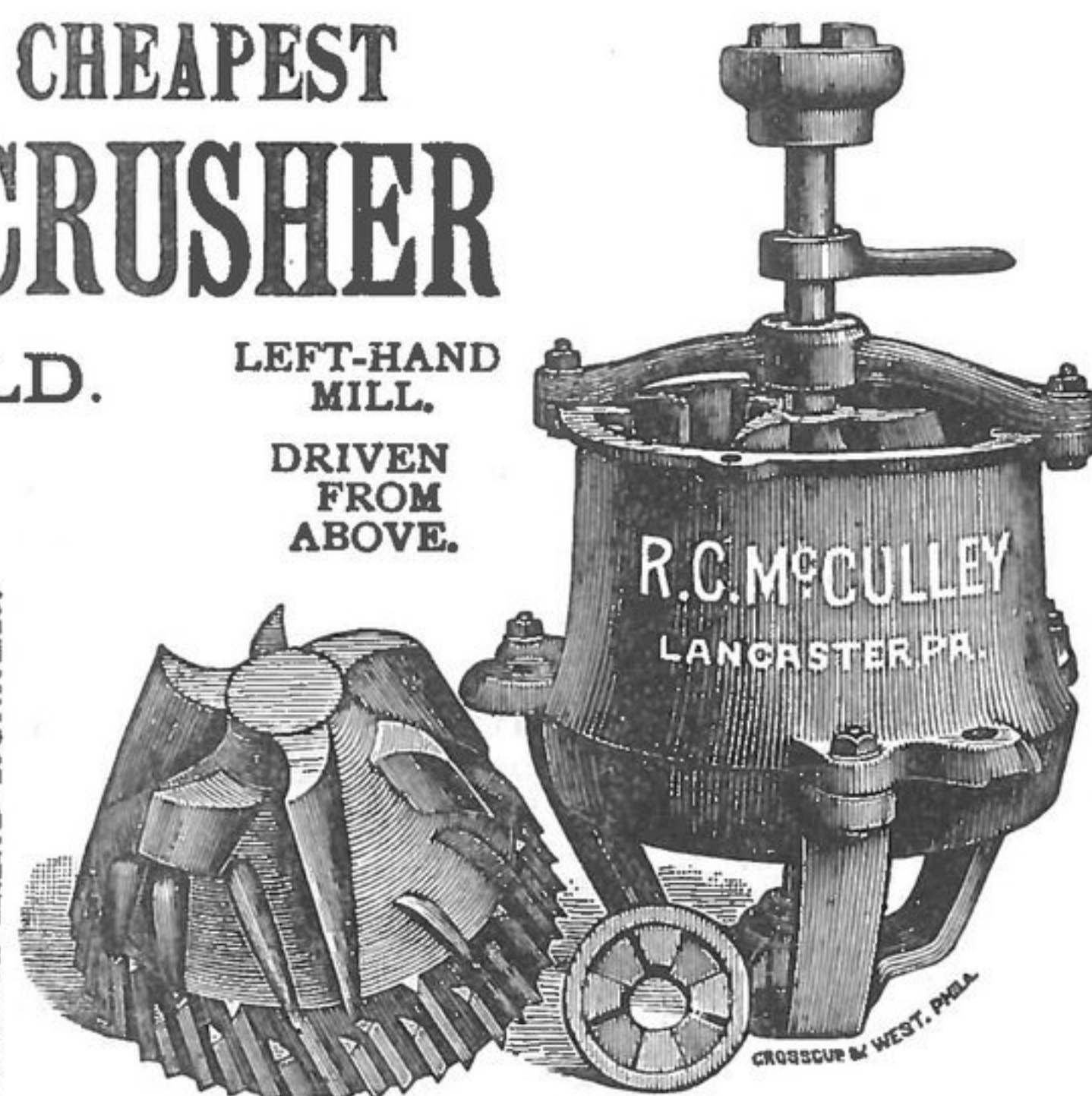
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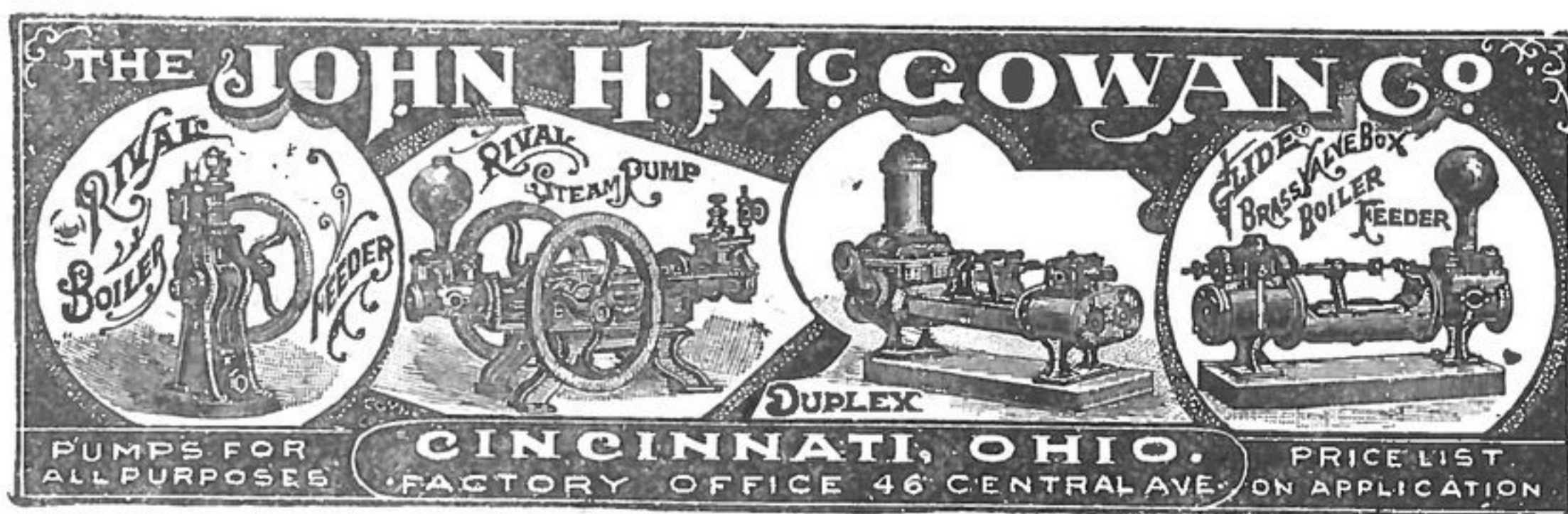
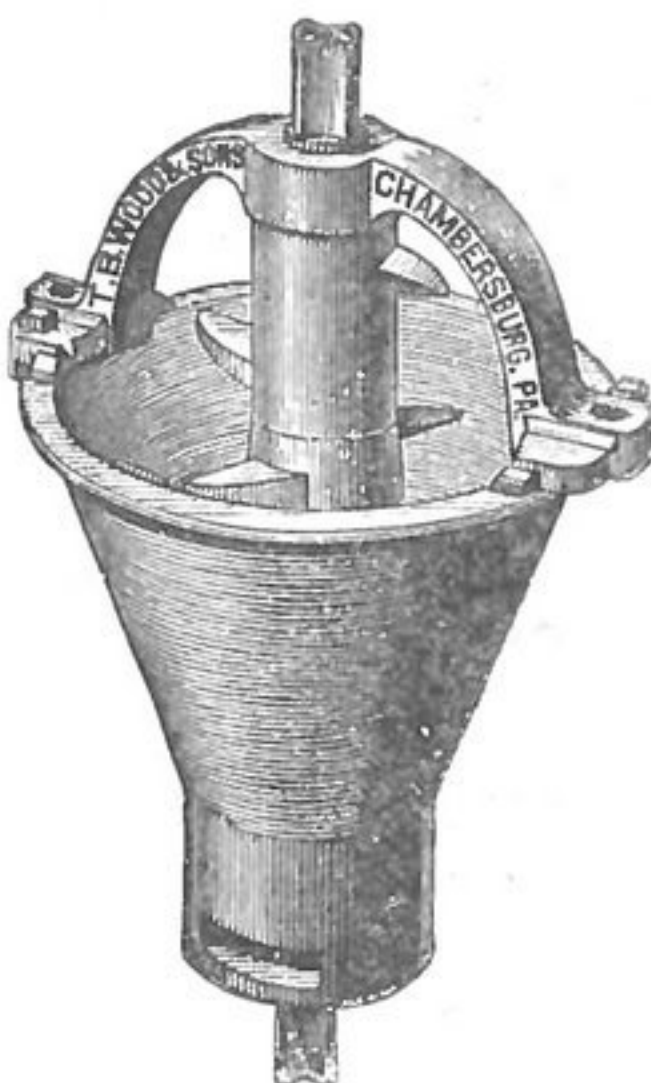
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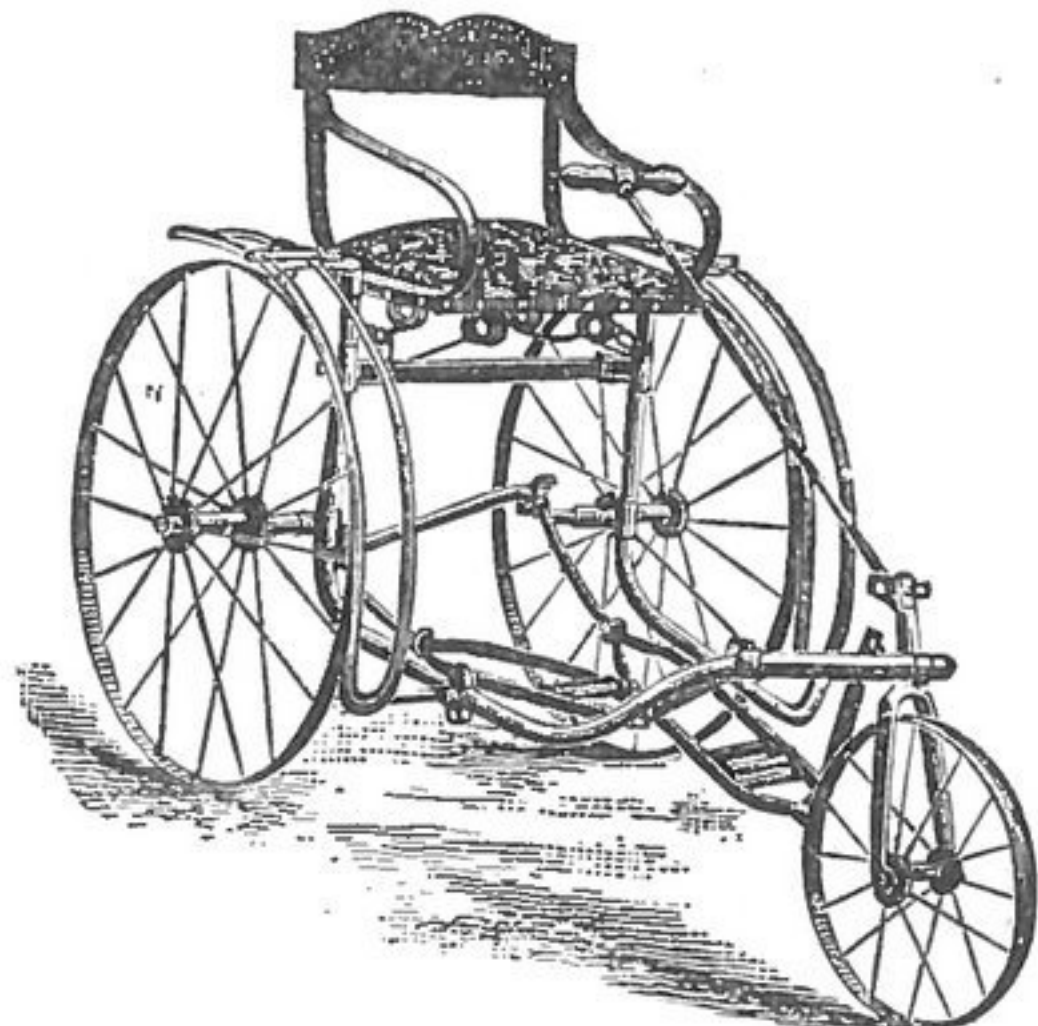
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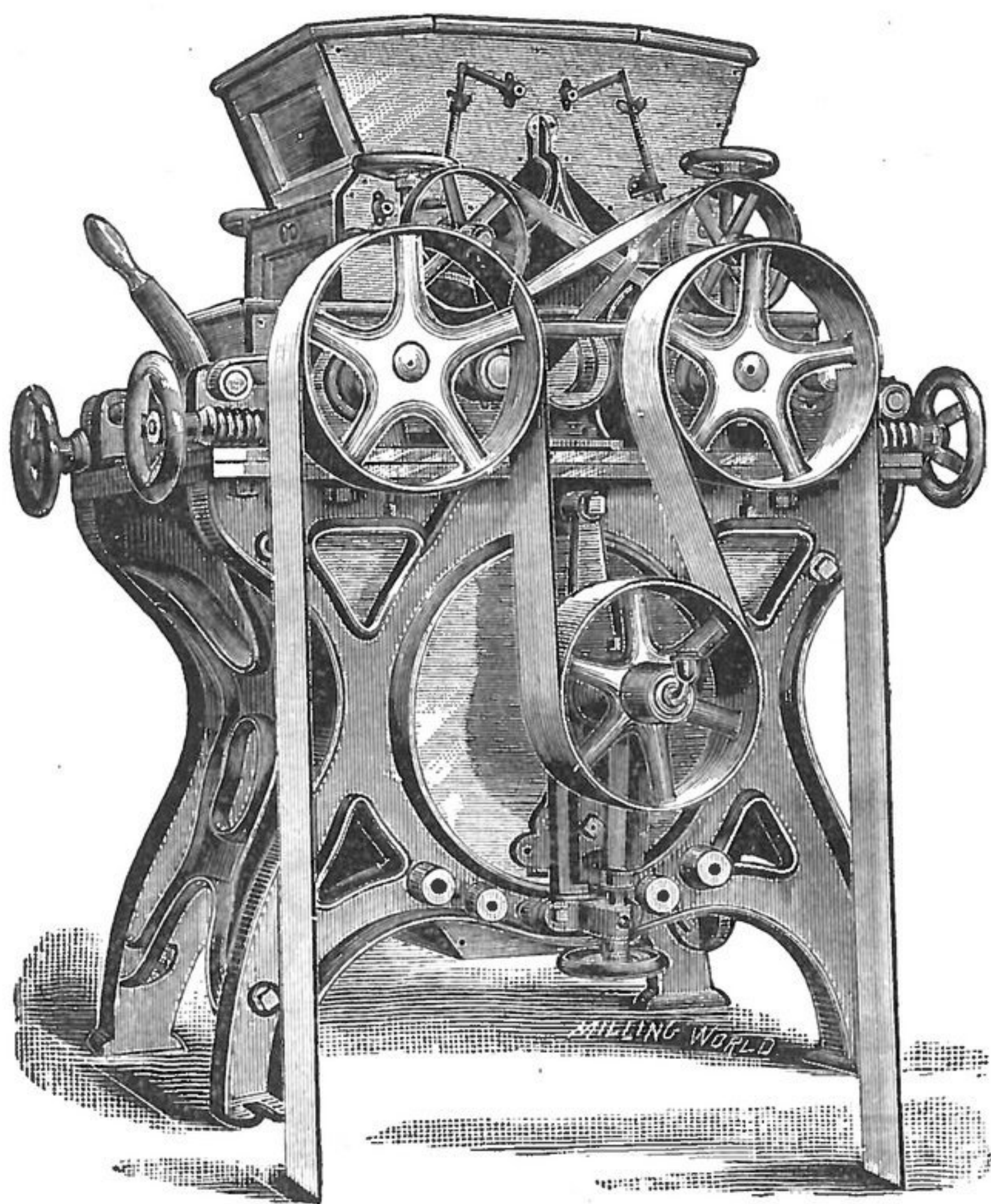
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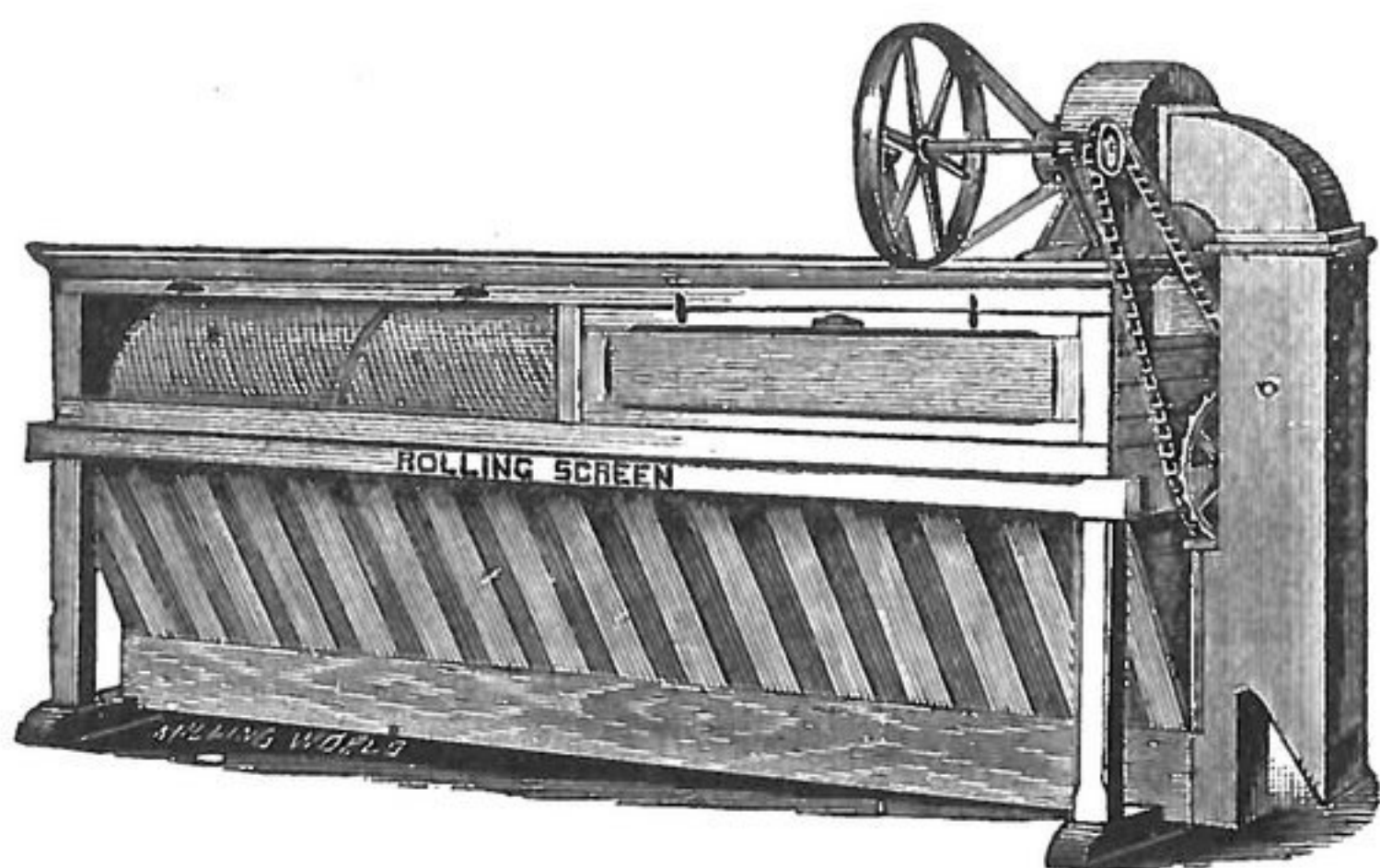
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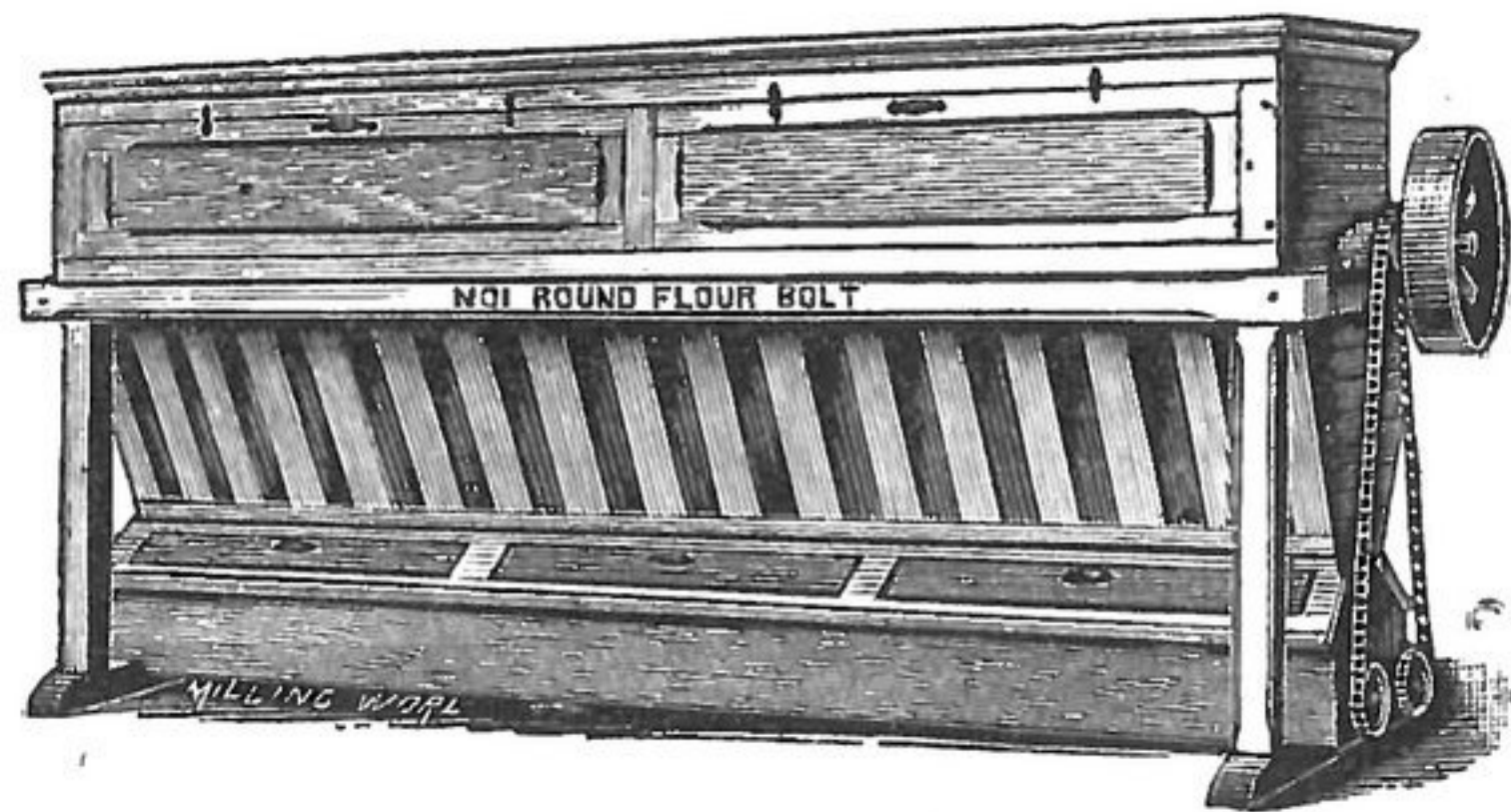
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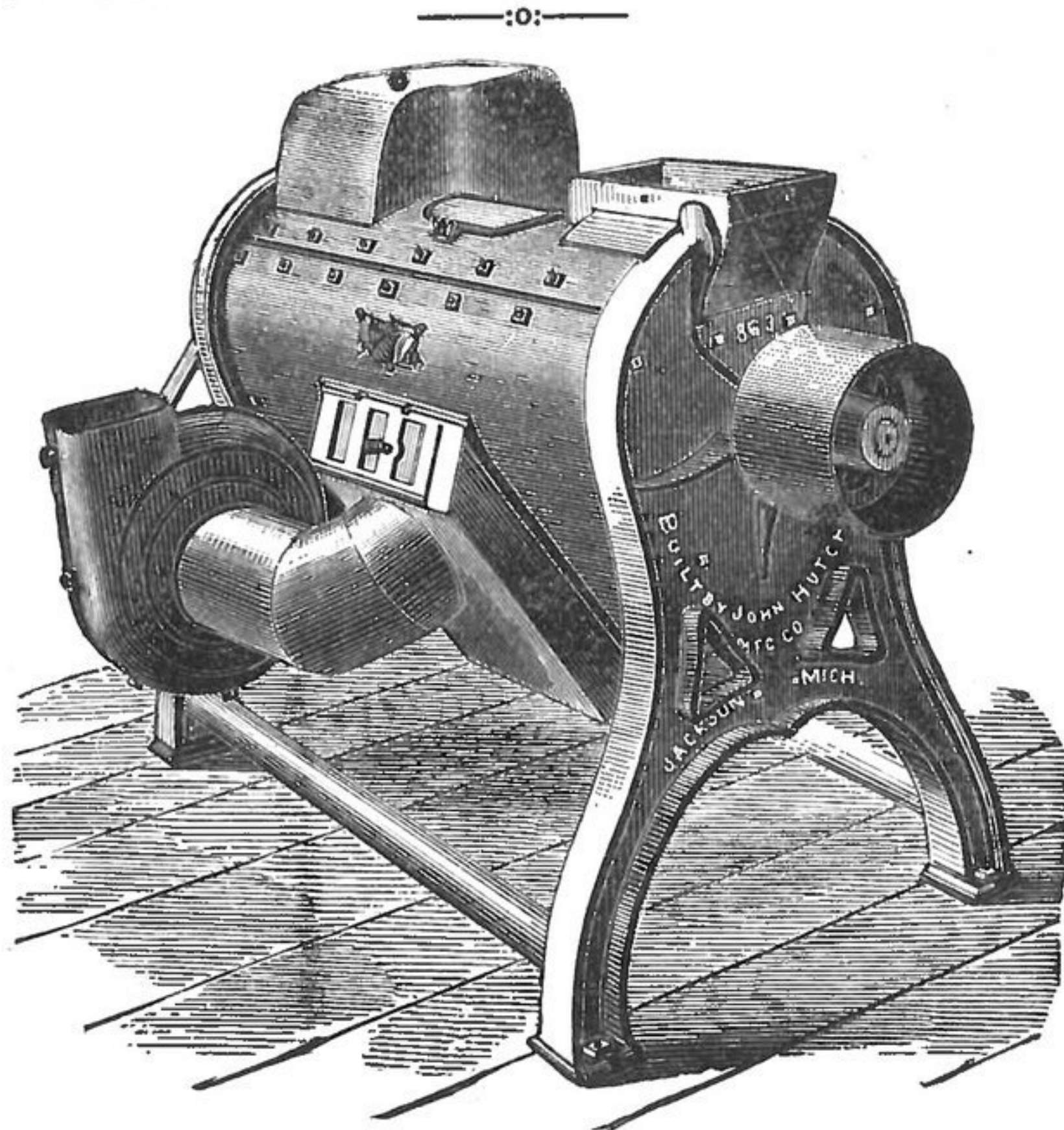


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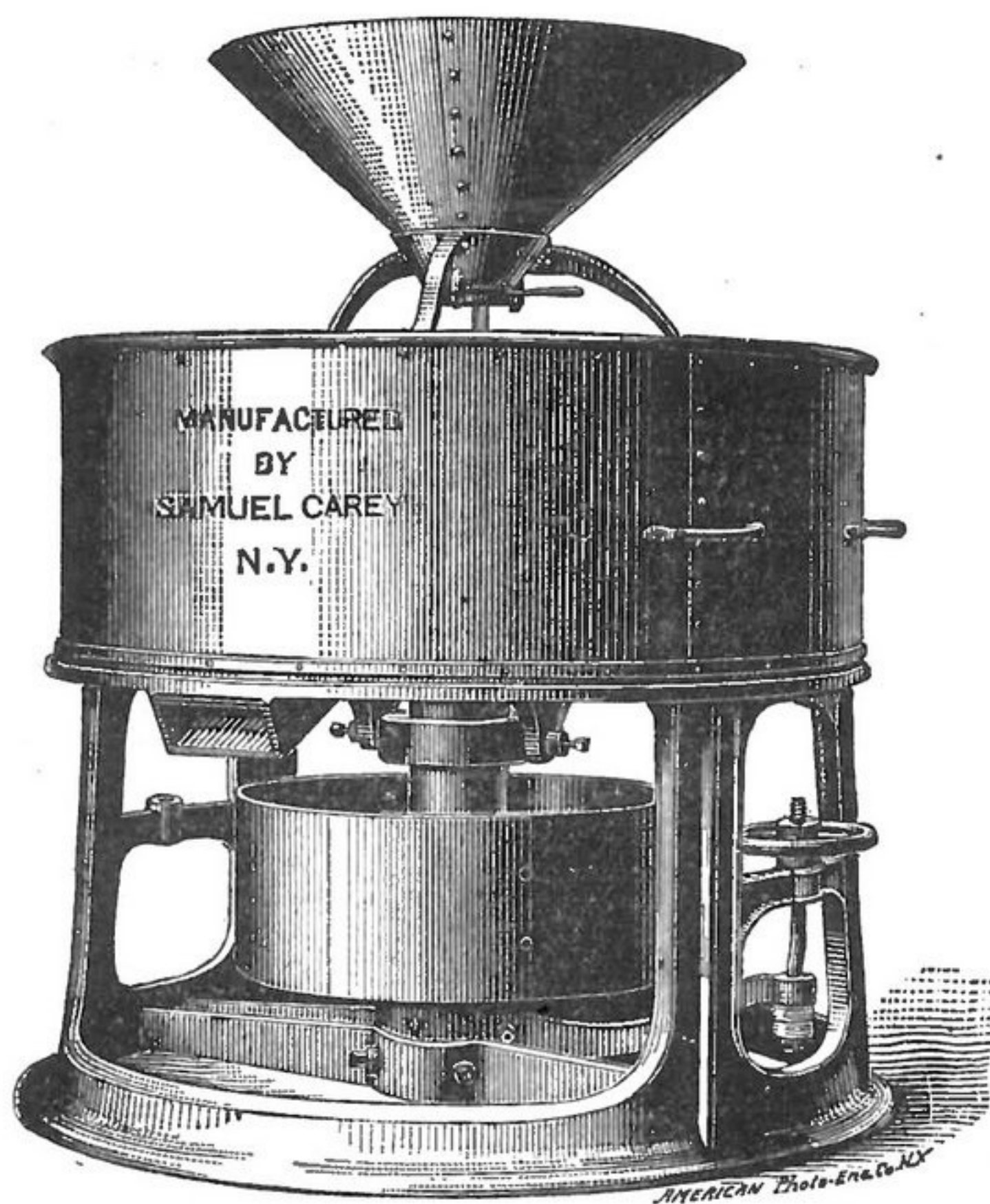
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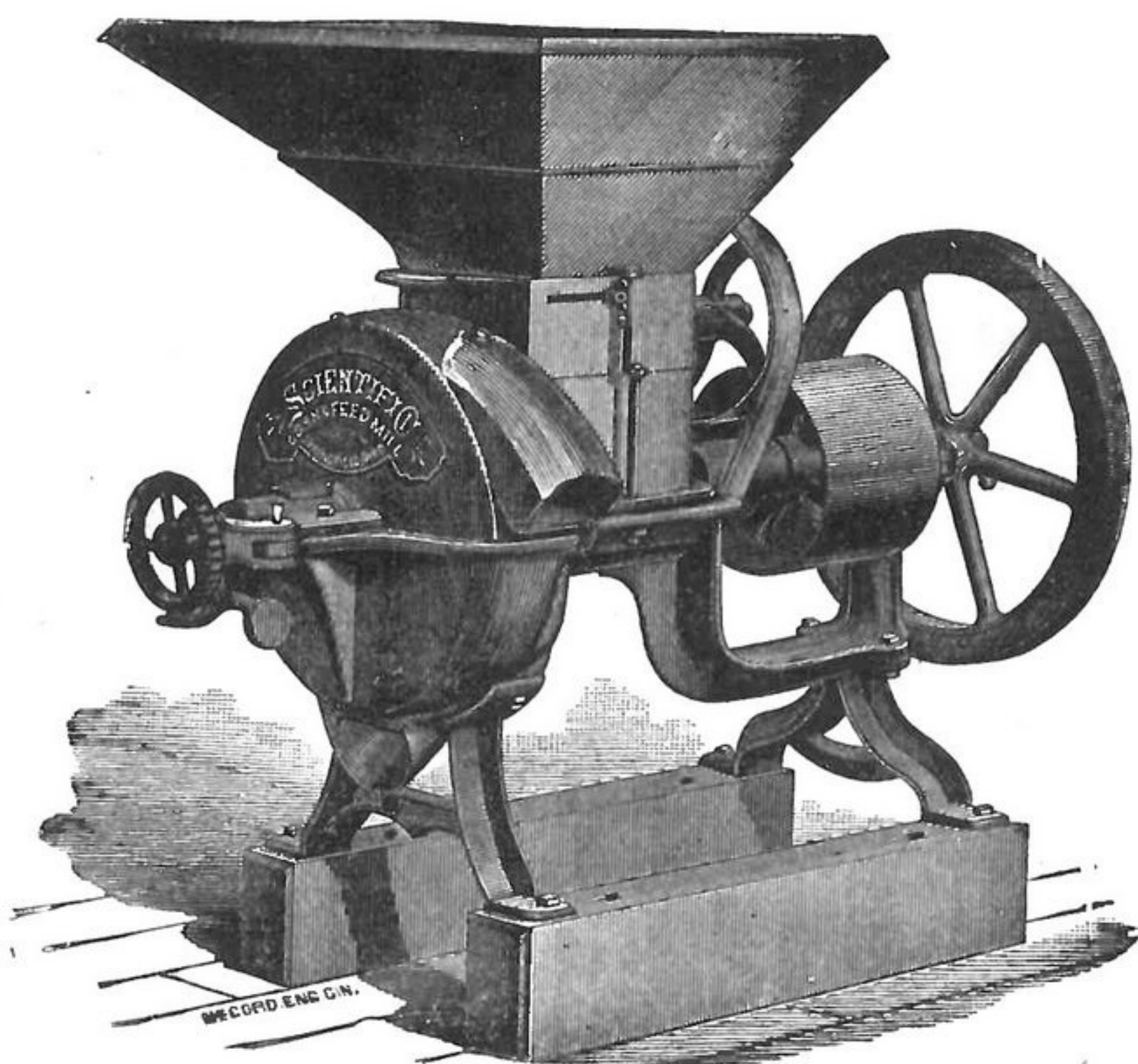
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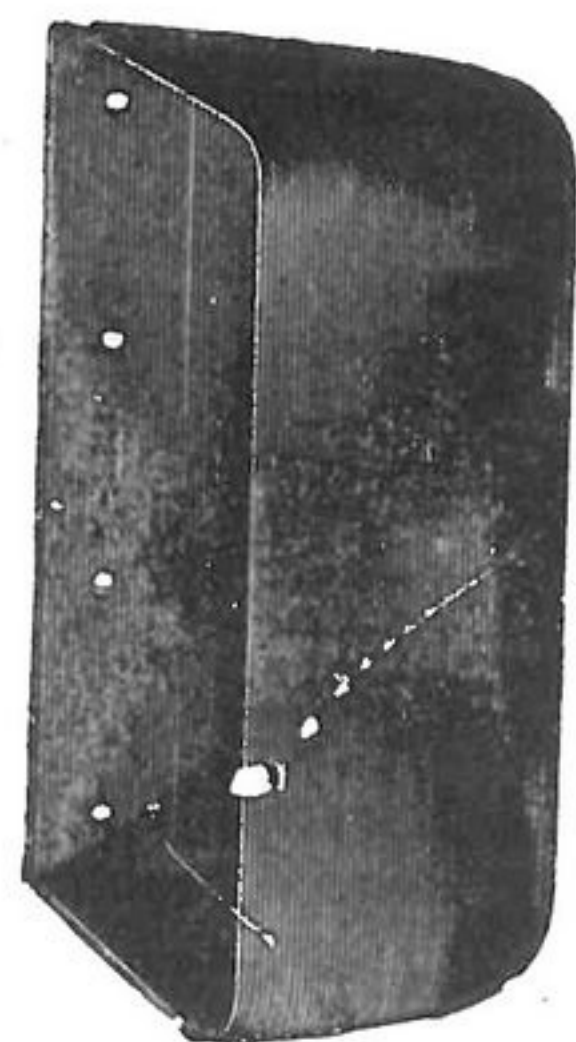
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